June, 1952

SOAP and Sanitary Chemicals

In this issue...

Floor cleaners—they go scientific as specialties

* * *

New ideas in auto polish push revamped formulation

* * *

Test detergent efficiency via radio active tracers

* * *

Taking a look at a new bactericidal material



Cover photo . . . New "Aero Shave" aerosol dispensed shaving lather of Boyle-Midway, Inc., New York. Newest addition to the company's line of chemical specialties retails for 59 cents. Speed of lather, of which there is said to be sufficient for 60 shaves from each container, is being stressed in advertising and promotion.

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to challenge the genius of nature!

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CLEANER

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There are 17 solid reasons why THERE IS ONLY ONE FULSHINE!

ONLY FULD MAKES FULSHINE

Satisfy yourself. Write today for samples, complete sales information, the famous Fulshine Sales-Clinching Test Kit, and prices.

*AP is a Registered Trade Mark of Fuld Bros., Inc.

Ask about the New Fuld patented Fulshine END-USE Economy TEST KIT . . . for your Fulshine customers.

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Warehouses in Principal Cities
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A GUIDE

TO WAX PRODUCTS PURCHASING FOR PRIVATE BRAND RESALE



An honest appraisal of floor wax products as we see it is offered to guide wax buyers who want the best quality money can buy...

SELF POLISHING WAXES

Candy's Supreme (standard)
Candy's DeLuxe
Bright Beauty (standard)
Candy's No. 640
Candy's Supreme Special WR
CAND-DOX #CS
CAND-DOX #BB

Seven floor waxes that *are* all-around top quality for any given traffic condition. Each imparts the finest protection and beauty to floors for which they are best suited.

Bright Beauty FLOOR CLEANER

An outstanding material for removing even the heaviest wax film and dirt.... Brings neglected floors "back to normal." The *right* cleaning agent to insure the most efficient floor maintenance.

Bright Beauty CREAM FURNITURE POLISH

A cream furniture polish that spreads easily, polishes without excessive effort and imparts a deep impressive lustre. Too, it permits *repeated repolishing* with a dry cloth saving reapplication time and again; truly a very economical polish of very highest quality.

Bright Beauty PASTE WAX

A paste wax that is properly blended and refined from excellent quality solids and solvents that produce the best drying time and thorough evaporation. A wax that is easy to handle, having "creamy" consistency and stability throughout its stocking and usage period.

Bright Beauty LIQUID (spirit) PREPARED WAXES

Complete line of spirit dissolved waxes that meet a wide variety of demands for durability, color and types of usages. Each its own "Dry Cleaner," they keep a surface waxed with a superb protective coating necessary to many difficult surfaces such as certain floors (where adaptable), bars, wallpaper, etc.

Bright Beauty GLASS POLISH & CLEANER and SILVER POLISH

As a Glass Cleaner (pink color) it applies evenly with little effort, wipes off easily with negligible "powdering" and produces an undeniable "feel" of cleanness to glass that is actually true in fact. Different in color only as Silver polish, it imparts a highly desirable lustre to all silver *without* abrasion and can even correct the abuses of scratchy, "quick-polish" inferior products.

Bright Beauty DANCE FLOOR WAX

Basic advantages are freedom from "balling up," thus does not gather dirt and impregnate the floor with hard spots difficult to remove...also is free from dusty effects. Adds the protective quality to expensive ballroom floors that means more "floor-years" to users everywhere.

Bright Beauty Heavy Duty PASTE CLEANER

Really *cleans* and *scours* more effectively and quicker than most scouring powders. Depending on application, it can clean to perfection even painted walls to provide a suitable repainting surface. 100% active, free from excessive abrasive quality, it frees almost every surface from all forms of foreign matter to perfection.

1. BEAUTY AND DURABILITY

should be considered together. Initial appearance is important, but for a waxed surface to remain beautiful it must be durable. Durability depends not only on resistance to the abrasion of traffic, but even more so on resistance to the collection of dirt and to discoloring traffic marks. Durability is really measured by how long the waxed surface maintains a nice appearance before the necessity of complete removal and re-waxing.

2. ANTI SLIP

qualities are necessary in a good wax as a matter of safety underfoot. This important quality does not necessarily require the sacrifice of beauty and protection which are the foremost original reasons for the use of a wax. Look for the proper balance—a wax film which is not excessively slippery yet which is not tacky and does not excessively collect dirt.

3. WATER RESISTANCE

is important, particularly when considering the possibility of wet traffic and the necessity for frequent damp mopping for the purpose of removing surface dirt. Overdoing this quality means greater difficulty in applying multiple coats of wax and may seriously increase the difficulty in removal when complete cleaning and re-waxing is necessary. Water resistance is important, but so is the quality of removability.

4. SOLID CONTENT

when expressed in percentage is not nearly as important as the *quality* of the solid content. When considering good quality, 12% of solids answers most needs for good planned maintenance programs. Two applications of 12% will give better results than one of 18%. However, the more concentrated material is useful for some programs of maintenance and particularly on "washed-out" floors, etc. Over-waxing should be avoided so that periodic complete removal will not be too difficult.

5. CARNAUBA WAX

is still the most important basic ingredient in our floor waxes. When refined and compounded with other important ingredients and "KNOW HOW" it aids materially in producing the most important features of a good floor wax... ALL AROUND QUALITY OF PERFORMANCE.

● ALL AVAILABLE FOR PRIVATE BRAND ONLY
We do not compete with our jobbers for consumer sales. We sell only to distributors, except for experimental accounts in Chicago essential to research.

Wax Specialists for over 60 years

Candy & Company, Inc.

2515 W. 35th ST., CHICAGO

SOAP and Sanitary Chemicals

Volume XXVIII, No. 6 June, 1952

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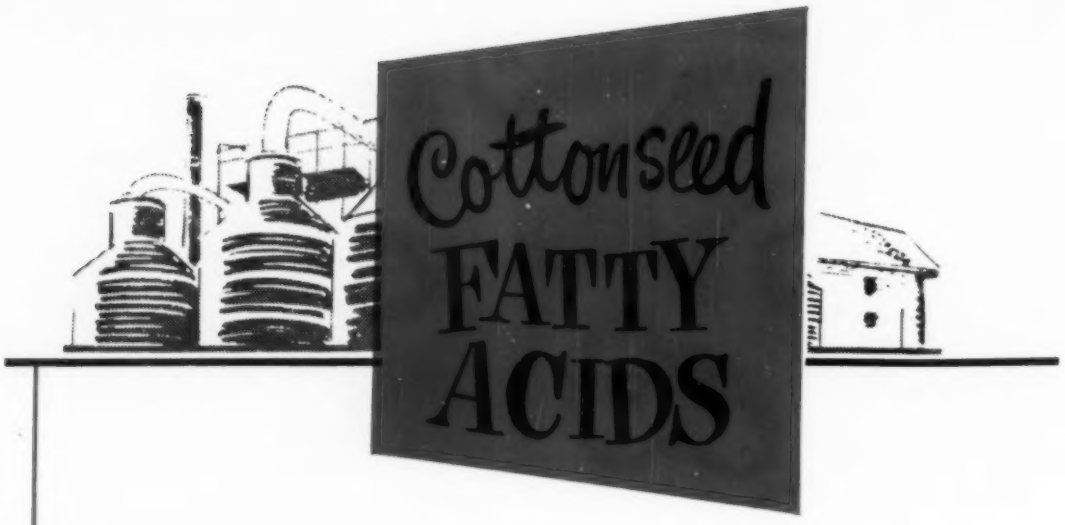
GRANT A. DORLAND
Vice President and Treasurer

Publication Office:
254 W. 31 St., New York 1, N. Y.

Chicago Office:
333 N. Michigan Blvd.

Member Audit Bureau of Circulations

Subscription rates: U. S., $4.00 per year; Canadian, $5.00; Foreign, $6.00. Copy closing dates—22nd of month preceding month of issue for reading matter and 10th of month preceding month of issue for display advertising. Entered as second-class matter June 16, 1949, at the Post Office, New York, N. Y., under the act of March 3, 1879.



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Titre	33° - 36° C
Color Lovibond 5¼" Red	5 - 10
Color Lovibond 5¼" Yellow	30 - 50
Unsaponifiable	2.0% max.
Saponification Value	200 - 204
Acid Value	199 - 203
Iodine Value (WIJS)	95 - 110

Send for samples and our booklet "Fatty Acids in Modern Industry". You'll agree that our products live up to the promises made for them.

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SIZE
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SENSATIONAL is the only word that aptly describes the new HY-TRON. A single unit that combines both the above functions at the same time—automatically—24 hours a day.

As an electrically operated odor destroyer, always performing at top efficiency, it will do more than dozens of bottles of liquid deodorant together, or hundreds of bottles used consecutively, at less cost.

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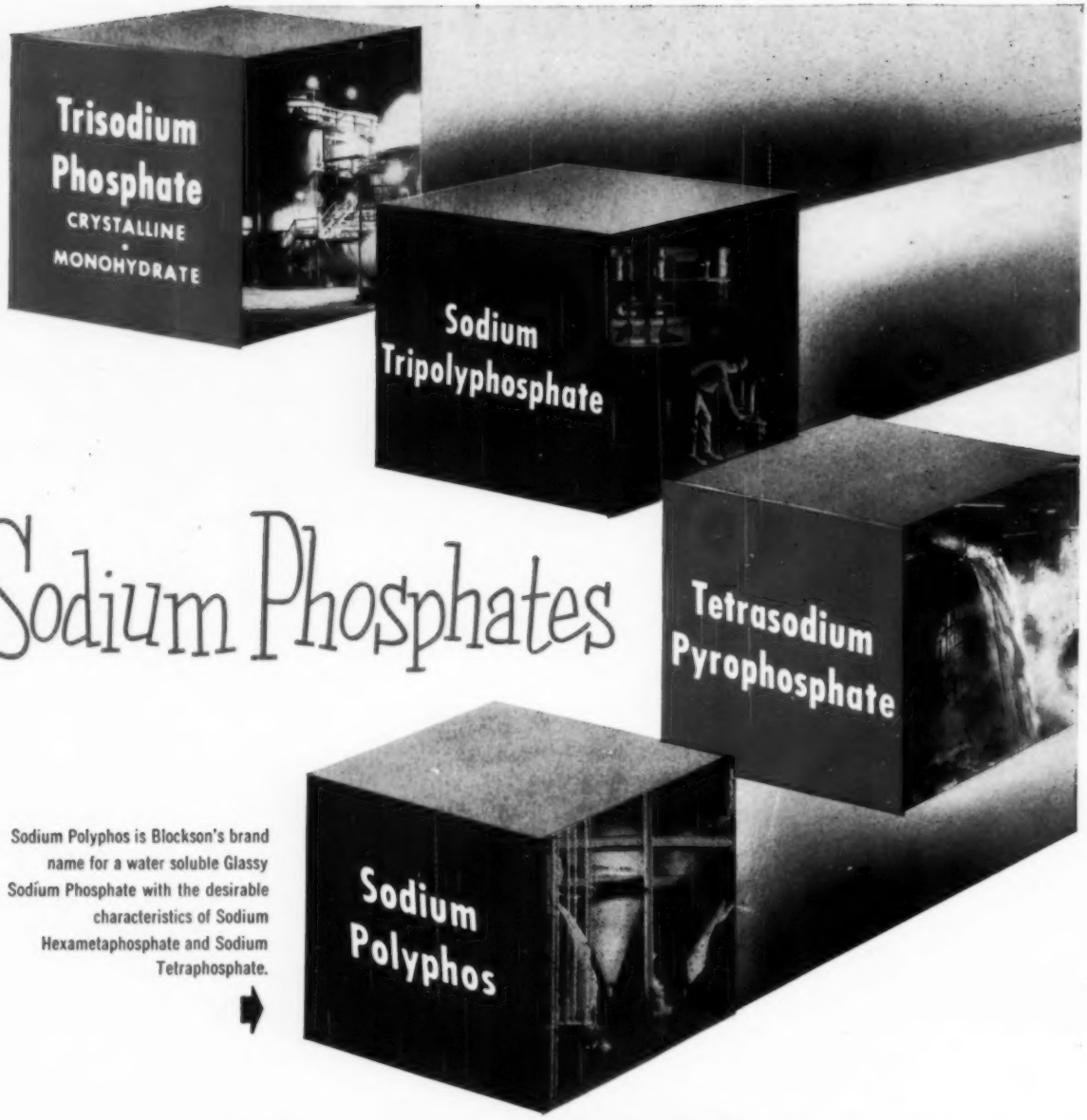
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FLEXSPOUT simplifies using, pouring and storing your liquid products. It's a powerful sales tool for any liquid that's packaged in steel pails.

FLEXSPOUT is odorless, tasteless and non-toxic. It resists attack by almost all chemicals, solvents and oils. Easily applied with one stroke of a simple hand tool, it permits faster filling and sealing, lowers production costs. For a few cents a pail it adds dollars worth of sales appeal to your products.

Almost all pail manufacturers are equipped to furnish pails ready for use with the **FLEXSPOUT** closure. For more details, prices and a free sample, just fill out and mail the handy coupon.

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Please send us... ☐ Free Sample ☐ Brochure

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NAME_____ TITLE_____
STREET_____
CITY_____ STATE_____

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OIL BOUQUET APPLE BLOSSOM No. 8240
OIL BOUQUET ALMOND No. 8262 Water Soluble
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OIL MIMOSA No. 615
OIL BOUQUET S No. 61
OIL JASMIN No. 613
OIL BOUQUET C No. 613
OIL BOUQUET F. L. No. 300

For LIQUID SOAP

OIL BOUQUET E.C. No. 618 Water Soluble
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Get next to D·Y "CIRENE"! It's the most popular Liquid Floor Wax on the market . . . now in greatest demand by all institutions who want best results plus true economy. "CIRENE" is water-resistant . . . yet easy to remove. Non-slip approved by Underwriter's Laboratories. Quickly, easily applied to all floor surfaces where wax is practical . . . "CIRENE" dries to a hard, lustrous finish in about 20 minutes.

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News of MONSANTO Chemicals

OF SPECIAL INTEREST TO FORMULATORS

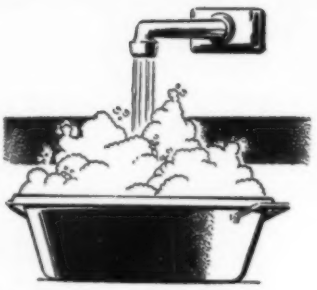
If you make DETERGENT CLEANERS

If you formulate detergent cleaners—either for resale or private labeling—make Monsanto Phosphate Division your headquarters for Phosphates, Detergents and Wetting Agents . . . For many years the Phosphate Division has served the cleaning industry with a growing number of basic chemicals characterized by their unvarying quality and performance across the entire cleaning front . . . Some of these chemicals and their properties are described in these pages. Further information is available at any Monsanto District Sales Office or directly from the Phosphate Division at St. Louis, Missouri. Please get in touch.

What do you want in a detergent cleaner?



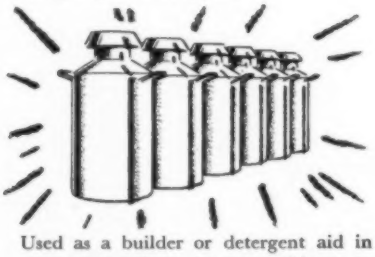
There are many different qualities demanded of cleaners in industrial, commercial and household formulations. In some cases detergency is of first importance—in others, wetting out, penetration, inactivation of calcium and magnesium ions, sudsing, emulsifying, dispersing, water softening, free rinsing. Whatever the demands of your particular formulation, you can be certain of a Monsanto product, or combination of products, that will meet them with continued satisfaction.



Water softening—valuable property of sodium phosphates

Monsanto sodium phosphates possess the ability to soften water—they have the very valuable property of sequestering certain metallic ions such as calcium and magnesium. (The word "sequester" used in this sense denotes the inactivation of calcium and magnesium ions in solution, rendering them non-reactive.) It is this sequestering action which is responsible for the water-softening quality of Monsanto Sodium Tripoly Phosphate and Tetra Sodium Pyrophosphate—extremely desirable where detergent mixtures are used in hard-water areas.

Detergency and Sodium Tripoly Phosphate



Used as a builder or detergent aid in soaps and synthetic detergents, Monsanto Sodium Tripoly Phosphate has the special ability to contribute to the detergency of the mixture produced by combination with other alkalies, synthetic detergents or soap. This quality is particularly desirable in industrial detergent compositions used for metals cleaning, dairy-equipment cleaning and dishwashing.

DETERGENT CLEANERS in metalworking plants

Some highly interesting information was recently developed by the publication IRON AGE and released in a report entitled "The Buying Influences Related to the Purchase of Metal Cleaners." This report is based on 400 replies received to a questionnaire sent to 2,000 metalworking plants employing 250 or more production workers.

Largest number of replies came from Machinery Manufacturers (123); next, Fabricated Metal Products (93); then Electrical Equipment (66); Transportation Equipment (57); Instruments (21); Metal Furniture (12); Miscellaneous, such as silverware, jewelry (28). Here's the score:

Of the 400 plants replying, 343 used detergent metal cleaners in their production operations—57 reported they were not using cleaners.

Of the 343 plants using detergent metal cleaners, 194 reported using them in washing machines, 263 in dip tanks (some plants used both methods).

There were 224 plants which reported the quantity of detergent metal cleaners used per year—*the total, 13,316,327 pounds.*

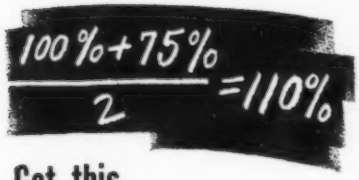
That's quite a market for detergent metal cleaners!

Santomerse No. 1 is an important ingredient in detergent cleaners.

WHO BUYS DETERGENT CLEANERS?

In the IRON AGE report just referred to, there is some interesting information as to who in metalworking plants actually specifies metal cleaners. There were 351 plants which answered the question: "Who decides which type of metal cleaner is to be used?"

Factory Managers and Superintendents (124) were most frequently mentioned—Master Mechanics (3) got the least mentions. Other titles—Process Engineers, Chemists and Metallurgists, Finishing Foremen, Industrial Engineers, Purchasing Agents, Finishing Superintendents, Chief Engineers, Vice Presidents and General Managers.



Get this detergency boost with sodium phosphates

One of the most remarkable properties of Monsanto sodium phosphates (both Sodium Tripoly Phosphate and Tetra Sodium Pyrophosphate) is their synergistic action. Synergism may be defined as the "cooperative" effect of two or more separate agencies (such as TSPP and Santomerse No. 1) which results in a *combined effect that exceeds the average of the two effects considered independently.*

For example, if Santomerse No. 1, with a detergency of 100%, and TSPP, with a detergency of 75%, are combined, the resultant detergency would seemingly be the average of the two, or 87½%. Actually, it is much more—*nearly 110%*.

Many formulators have found it very profitable to take advantage of the detergency boost made available through synergistic action.



Thorough rinsing with sodium phosphates

A very valuable property of Monsanto Sodium Tripoly Phosphate and Tetra Sodium Pyrophosphate is their "peptizing" quality—the ability to keep small particles of solids suspended in a water solution so they will not be re-deposited during the cleaning and rinsing cycle. Complete rinsing is thus accomplished since suspended soil particles simply "go down the drain."

SOME CLEANING!

Scarcely a second of the day and night passes without a lot of cleaning being done by somebody, somewhere. In the UN secretariat building, for instance, there are 5400 windows and hundreds of mirrors — literally acres and acres of glass that are kept continually clean. Some job! Some market for cleaners!

With Santomerse No. 1,



it's teamwork that does it

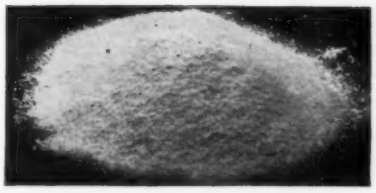
There are 5 combined properties—and actions—in Santomerse No. 1 that have established it as one of the most effective all-purpose detergents and wetting agents used in the formulation of detergent cleaning compounds.

These properties that team up and pull together are: (1) Detergency, (2) Sudsing, (3) Wetting Out, (4) Emulsifying, (5) Dispersing . . . No one of these features is overdeveloped at the expense of the other — all work together, all work hard and effectively.

Use Santomerse No. 1 to put combined, all-purpose action into your detergent cleaner formulations. It is available in flake and granular form.

Doubly active detergent and wetting agent

Santomerse 80 has all the detergent, sudsing, wetting out, emulsifying and dispersing qualities present in Santomerse No. 1, BUT with this difference: *Santomerse 80 has double the active content.* This represents a savings on the basis of active content alone — also it has an advantage where storage and handling are considerations.



BLENDING ADVANTAGES OF SANTOMERSE No. 1

GRANULAR Santomerse No. 1 is produced especially to give formulators of cleaning compounds a detergent that blends so perfectly with other ingredients that its identity is completely integrated in the formulated product.

Granular Santomerse No. 1 mixes thoroughly and easily with phosphates, silicates and carbonates, making mechanical blends that have much less tendency to stratify. When combined with sodium phosphate, Santomerse No. 1 delivers a detergency bonus through synergistic action.

Chemically, *granular* Santomerse No. 1 is identical with Santomerse No. 1 flakes. It is equally effective in hot or cold, hard or soft water, in acid or alkaline solutions. It is a rapid wetter and an effective, all-purpose detergent that lifts out dirt and grease, holding dislodged particles in suspension so they are carried away in the rinse.

Formulators interested in a better way to make a better detergent compound are invited to investigate the possibilities of *granular* Santomerse No. 1. Contact any Monsanto office.

MORE POWER
if you formulate sprays

If you formulate insecticidal, fungicidal and herbicidal sprays, include the extra wetting power and spreading provided by Santomerse No. 1. It is quickly soluble in water at any pH—adds much to the killing power of your toxicant formulae.

Santomerse: Reg. U. S. Pat. Off.

MONSANTO CHEMICAL COMPANY, Phosphate Division, 1700 South Second Street, St. Louis 4, Missouri.

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Phosphate Division, 1700 South Second Street
St. Louis 4, Missouri

Please send more information on the following: .....Tetra Sodium Pyrophosphate. .....Sodium Tripoly Phosphate. .....Santomerse No. 1. .....Santomerse No. 1, granular .....Santomerse 80.

Name.....Title.....

Company.....

Street.....

City.....Zone....State.....



Dressed up *with an attractive ACL label and Owens-Illinois closure, this 16-oz. amber round No. A-8320 makes an outstanding, low-cost sales package for a host of automotive products.*

How to be on the lookout for sales

Chances are your product has to sell itself at the point of sale with today's growing trend toward self-service distribution.

That's why you want to be sure it has all the sales help you can give it to catch impulse sales. By packing in Duraglas stock-mold containers, you can give your line a highly distinctive sales package and still keep within commercial limits on container costs.

Owens-Illinois has hundreds of different sizes, shapes and styles from which you can choose the Duraglas stock-mold containers that are exactly right for your line. Then our packaging specialists will help design an attractive label and closure combination to present your selling message distinctly and forcefully.

Call our local office nearest you for more information today. Remember, no matter what market conditions may be, it always pays to give your line the advantages of selling impact at the point of sale.



The Duraglas stock-mold rounds, shown above, help your line gain brand recognition at the point of sale. Available in a family range of 19 sizes—½-ounce to 128-ounce in flint or amber.

Duraglas bottles are protectors of quality

TRADE MARK REG. U.S. PAT. OFF.

OWENS-ILLINOIS GLASS COMPANY · TOLEDO 1, OHIO · BRANCHES IN PRINCIPAL CITIES



"You can't tell me I'm getting what I pay for!" roared Jobber Z's best customer. "The least I can expect at this price is a floor that shines!" And Jobber Z lost his best customer.

This is how the problem was solved!

Jobber Z came to us to ask if we could help him regain this valuable business. Our Field Service man, representing Jobber Z, arranged an appointment with his ex-customer to check into the situation. His investigation uncovered the trouble at the very start. It was a simple case of a poor start leading to a very bad finish.

Oil Specialties Field Service man reported to Jobber Z that his ex-customer was using improper cleaning materials before waxing, and that *any* wax he used would not give him the shine and lustre he wanted. He then recommended that our Vego Liquid Cleanser be used before waxing, with the assurance that this method of pre-wax preparation would result in maximum satisfaction.

The ex-customer is now a customer again, and swears by—not at—the jobber, who now sells two products where before he sold but one. Another example of how Oil Specialties Field Service can go to work for *you*.

For further information about our products and services, write us today. Write, too, for our FREE, informative booklet "FLOOR WAXES — USES AND APPLICATIONS."

Floor Waxes • Cleaners • Soaps • Polishes • Disinfectants

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- Railroad Car Cleaning
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- Fruit and Vegetable Cleaning
- Car Washing
- Detergent Sanitizers

WETTING ACTION IN...

- Laying of Coal Dust
- Pickling Steel
- Film Developers
- Wall Paper Removers
- Wetting Clays

DISPERSING ACTION IN...

- Soap Formulations
- Metal Polishing Compounds
- DDT and 2, 4-D Acid Dispersions
- Pigment Mixing

EMULSIFYING ACTION IN...

- Chlordane Formulations
- Dry Cleaning Operations
- Cosmetic Creams and Ointments
- Wax Polishes
- Emulsion Paints
- DDT Emulsifiable Concentrates

Write for this bulletin...

covering physical, chemical and performance characteristics . . . uses, applications and formulations.



onyx

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INDUSTRIAL DIVISION
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S-15: 22, 24, 28, 30, 33mm and larger metal or molded caps

Calmar Plastic Sprayers

Guaranteed satisfaction in luxury colors at low cost for glass cleaners, residual type insecticides, space deodorants, medicaments, moth sprays, etc. Red, blue, green, yellow, ivory head and collar combinations.



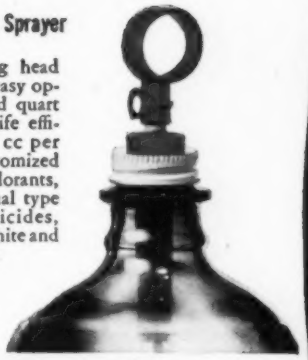
S-20: 20mm caps only



S-10: 18mm and smaller caps only

Calmar Heavy Duty Sprayer

Unique plastic ring head construction gives easy operation for pint and quart applicators. Long life efficiency delivers 3 cc per stroke in a finely atomized spray for room deodorants, disinfectants, residual type insecticides, fungicides, moth sprays, etc. White and red collar and head.



S-15/L

Calmar



No. 1



No. 2



No. 5

Calmar Plastic Dispensers

These low cost attractive dispensers are featured by many leading manufacturers of hand lotions, liquid soaps, baby oils, beauty preparations, and household products. Calmar dispensers are equipped with stainless steel balls and springs. Calmar dispensers will never corrode when used with dispensable liquids not containing aromatic hydrocarbons, ketones or esters. All of the smart ivory head styles illustrated are assembled to jet black molded caps from 18mm to 33mm.

Calmar Mohair Applicator



Designed primarily for cleaning fluids, this functional closure is available in 28mm cap size with red enamel metal cover.

Calmar Atomizers

Save money yet actually improve your package with refreshingly new pastel colors. Compare Calmar's non-plugging, fine mist atomization with any metal atomizer. You will be amazed! The snow white polyethelyne mounting will never discolor or corrode.

Complete assembly includes matching color urea caps and rubber bulbs in your choice of Dawn Pink, Laguna Green, Light Blue and Off White. Immediate shipment of stock colors in urea cap sizes: 15-415, 18-400, 18-410, 20-410, 22-410.

Special color caps and bulbs also available. Can be mounted to your own caps.



Valveless rubber bulbs for colognes, anti-perspirants, hair preparations and products requiring the finest atomization.



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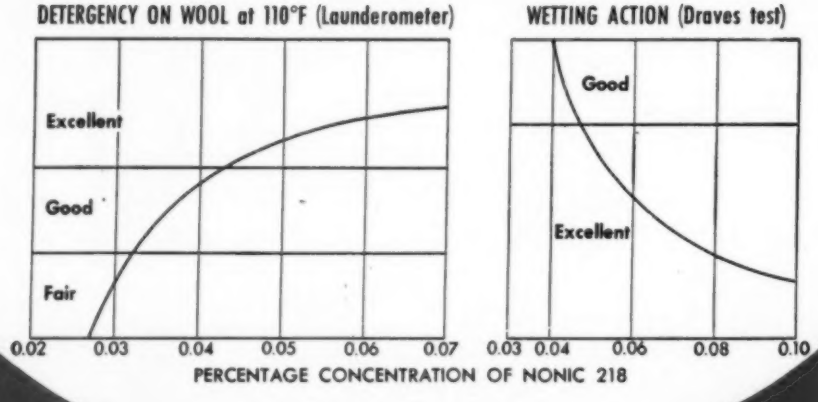
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- Extremely fast wetting action
- Excellent properties of dispersion and emulsification

NONIC 218 is an excellent detergent and wetting agent at low concentrations over wide ranges of pH, water hardness, and temperature.

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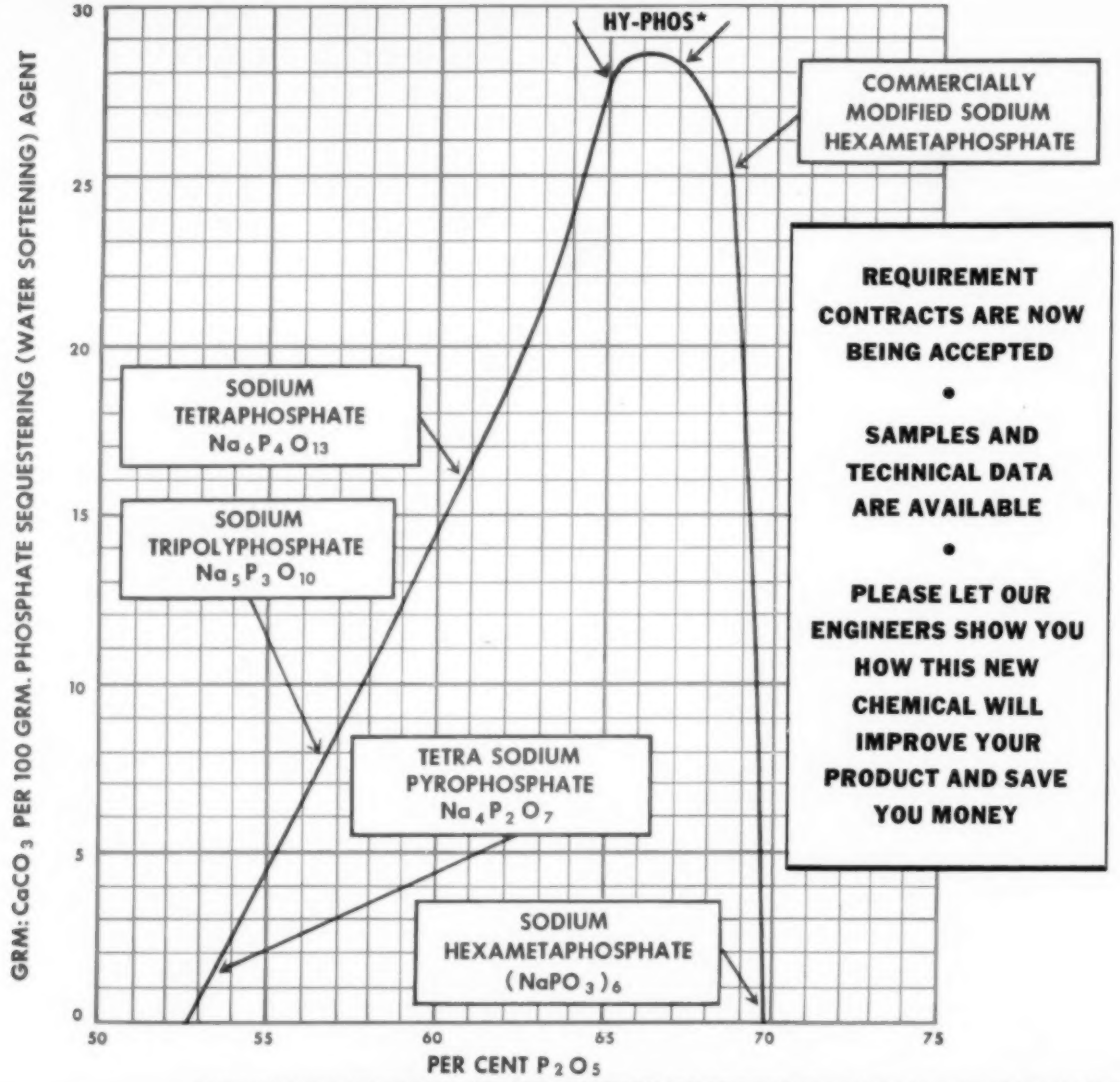
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REQUIREMENT CONTRACTS ARE NOW BEING ACCEPTED

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AMA Reports on Vaporizers

THE American Medical Association through its Committee on Pesticides issued a report warning against improper and excessive use of insecticide vaporizing devices which appeared in the May 24th issue of the association journal. The report includes the conclusion: "The continued operation of such devices violates accepted health practice, and therefore, they should be supplanted by more acceptable means of insect control."

Under controlled conditions, tests of some devices on the market showed that quantities of insecticides were dispensed which did not deposit in significant amounts on exposed surfaces nor accumulate in the atmosphere of properly ventilated rooms sufficiently to cause injury to humans exposed for the usual working periods, according to AMA comments.

Safe standards were not working out in practical every-day use of the machines, according to the report, which stated: "It was found under practical conditions of use, however, that the laboratory standards for safe and effective performances were not being duplicated in practice. Poor construction and installation of units, tampering to effect greater control, overheating that resulted in excessive output, substitution of chemicals and formulas other than those recommended, installation in homes where overexposure to young children was likely, and a variety of other abuses have occurred. These are fostered in part by exaggerated claims for efficiency and harmlessness and in part by a growing tendency of users to increase the output of the machine in order to control resistant strains of insects."

A warning against the use of vaporizing devices in homes or sleeping quarters was included in the report which added that if it be found necessary to use any vaporizer, only those which protect against fire hazard, excessive vaporization and a break-down chemically of active ingredients because of high temperatures should be employed. "Few if any of the devices which are currently in operation have the protective features previously enumerated, and may not even provide for thermostatic control," the report added.

In reviewing the AMA report in a technical bulletin to its members, the National Pest Control Association pointed out that the recommended rate of discharge of vaporizers is one gram of insecticide in 15,000 cubic feet of space over a 24 hour period, and that such units should be installed above head level, three or more feet below the ceiling and removed from areas where the insecticide can deposit on walls and fixtures or where it could contaminate exposed foods. These are the original recommendations issued by the Interdepartmental Committee on Pest Control (Dr. H. L. Haller, USDA, chairman) in September, 1951, and are also those of the AMA committee. A symposium on vaporizing devices is included in the program of the 38th mid-year meeting of the Chemical Specialties Manufacturers Association in Boston, June 9-10.

—— ♦ ——

Attacks Big Soap Companies

"Big" soap companies, along with "big business" generally, the labor unions and the farmer cooperatives came in for criticism in a plea for "decentralization" made at a recent meeting of the National Independent Meat Packers Association in Chicago. The speaker was Ed Wimmer of Cincinnati, vice president of the National Federation of Independent Businesses, Inc. After presenting a 13-point program for breaking up large concerns and organizations, Mr. Wimmer referred to the soap industry in these words:

"Another fight which the small packers should be making, and they should have the suport of all segments of the meat industry, is a fight against the monopolistic conditions existing in the purchase of fats by the big soap companies. These big soap companies have contributed a great deal toward the high price of meat and have used the money that retailers should have gotten for tallow, in huge advertising campaigns to further entrench their monopolies. The Department of Justice has gathered the facts in this situation, which show clearly that monopoly does exist, but prosecution has been lacking for some mysterious reason."

"Big" government, Mr. Wimmer stated, is something the country will have to get along with, for a time, at least. So long as there are industrial and labor giants and the giant farm co-ops to be dealt with, the federal government must be bigger than they are, he contended. But, after government has disposed of these "monsters," as he called them, it will be time to begin tackling the problem of getting big government cut down to size.

—— ♦ ——

Solvay Advances Meredith

Appointment of G. B. Meredith as assistant to M. F. Vogler, vice-president in charge of nitrogen plants, was announced recently by Solvay Process Division of Allied Chemical & Dye Corp., New York.

Mr. Meredith formerly was chief chemist of the division's South Point, Ohio, nitrogen products plant. Since coming to Solvay in 1927 he has served successively as assistant control chemist, assistant plant chemist, plant chemist, and chief chemist.

—— ♦ ——

Whittaker Sells Loomis Talc

Whittaker, Clark & Daniels, Inc., New York, is sales-distributor for W. H. Loomis Talc Corp., Governeur, N. Y., it was announced recently. Whittaker sells Loomis fibrous talc in Massachusetts, Rhode Island, Connecticut, New Jersey, and the southern part of New York State.

Click Chemical Expands

Click Chemical Corp., Mount Vernon, N. Y., recently announced establishment of a new factory for the processing of paradichlorobenzene and cleaning products. At the same time the firm reported various changes in personnel: Millard Fisher, formerly director of sales has become president; James V. Williams, formerly with Arnold Baking Co., vice-president and director of sales; Mayron J. Sappington, formerly manager of Norma Division, secretary-treasurer and director of operations. Henry Pizzutello, president of Pizzutello Stone Works, has been elected chairman of the board of directors, and Joseph Bonner, owner of Bonner & Co., New York, a director.

O.K. Sulfoxide for Aerosols

Approval by U. S. Department of Agriculture of the use of the insecticide synergist, sulfoxide, in aerosols was announced recently by S. B. Penick & Co., New York. This decision is based on study of laboratory activity when combined with pyrethrins or allethrin. In granting general approval for sulfoxide, USDA also granted specific approval of four aerosol formulations submitted by the manufacturers of sulfoxide, S. B. Penick & Co. Sulfoxide content in these four formulations varies between one and five percent. Sulfoxide is currently being used in formulations of fly sprays, roach sprays, dairy sprays, etc.

Hooker Expansion Loan

Hooker Electrochemical Co., Niagara Falls, N. Y., producer of chlorine, caustic soda, and various chlorinated organic chemicals, recently announced completion of negotiations for a 25-year loan in the amount of $20,000,000. Hooker's present expansion program calls for an expenditure of $25,000,000 in the years 1952-53. This will include a $10,000,000 caustic and chlorine plant to be erected at Montague, Mich.; further expansion of caustic and chlorine capacity at Tacoma; expansion of capacity in Niagara Falls; and other additions and improvements.

By the end of 1953, the announcement added, Hooker's gross plant and equipment value will approximate $58,000,000 or four times the $14,500,000 value at the end of 1945.



J. L. Dampier (above) and James A. Barnett were elected vice-presidents of Lever Brothers Co., New York, it was announced May 28 by Jervis J. Babb, president. Mr. Dampier was elected marketing vice-president for the Lever Division, and Mr. Barnett was named consumer relations director and a member of the board of directors. Mr. Barnett's position is a newly created one. He is acting in an advisory capacity to the four marketing divisions of the company on advertising and promotion. Mr. Dampier in his new post is in charge of all activities of the marketing operations of the Lever Division.

Chicago Rodent Campaign

Arthur E. Marks, formerly with the U. S. Public Health Service, has been selected to head the city wide rat extermination program which is being organized by the Chicago municipal health department. He will serve under Dr. Frank Meriwether, who was recently appointed acting head of the city's Board of Health, after many years of service with the USPHS in the Chicago area. Dr. Meriwether assumed this post when Dr. Herman Bundesen was given a leave of absence.

New Dow Miticide

Dow Chemical Co., Midland, Mich., recently announced "Ovotran," a new miticide, said to kill mites for several weeks after application. It is a fine wettable powder, containing 50 percent para-chlorphenyl-para-chlorobenzenesulfonate, and is chemically compatible with other insecticides and fungicides. Low toxicity and absence of hazard to the operator are claimed for it by the manufacturer.

New Hudson Sprayer

A new light-weight compression sprayer of 1¾ gallons capacity, designated "Favorite", was recently introduced by H. D. Hudson Manufacturing Co., Chicago. The sprayer features a new "Saf-T-Lok" closure, providing leak-tight sealing and safe opening, and a rotatable control valve, permitting the five-spray nozzle to be turned in any direction without twisting the hose. The hose, of chemical-resistant plastic, is five feet long, which allows the sprayer to be set down and spray an area of up to nine feet away. With the nozzle set at stream, this distance is increased to 25 feet.

At the same time Hudson announced a one-cent sale promotion on its 4-jet nebulizers. This is built around a counter display which is offered with the following assortment of Hudson nebulizers: two dozen half-pint nebulizers, one dozen pint nebulizers, one dozen quart nebulizers, and one half dozen two-quart nebulizers. Of the two dozen half-pint nebulizers in the assortment one half dozen are furnished at no cost. Display materials included with the assortment permit the retailer to offer the half-pint nebulizer for one cent when purchased in combination with a two-quart nebulizer at the regular price.

Exhibit at Camp Show

Kil-Jet Distributing Co., Cleveland, O., demonstrated its "Kil-Jet" portable fog generator for outdoor or indoor insect control at the recent 22nd biennial convention of the American Camping Association in Chicago. Also displaying sanitation chemicals for use around summer recreation camps were Alexander Chemical Corp., Chicago, and Camp Chemicals, Inc., Brooklyn, N. Y.

Shell Moves in Newark

The Newark Sales District of Shell Chemical Corp., New York, recently moved its offices from the Raymond Commerce Building to larger quarters at 10 Commerce Street, Newark 2, N. J. There is no change in the telephone number.

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Bulletin SF-2—"Reactions of SO_3"
Lists reactions with aliphatic organic compounds, reactions with aromatic organic compounds, reactions with inorganic materials.

Bulletin SF-3—"Storage, Handling and Use of SULFAN"
Safety and precautions, laboratory evaluations, sulfonation techniques, bulk handling, vaporization of SULFAN.

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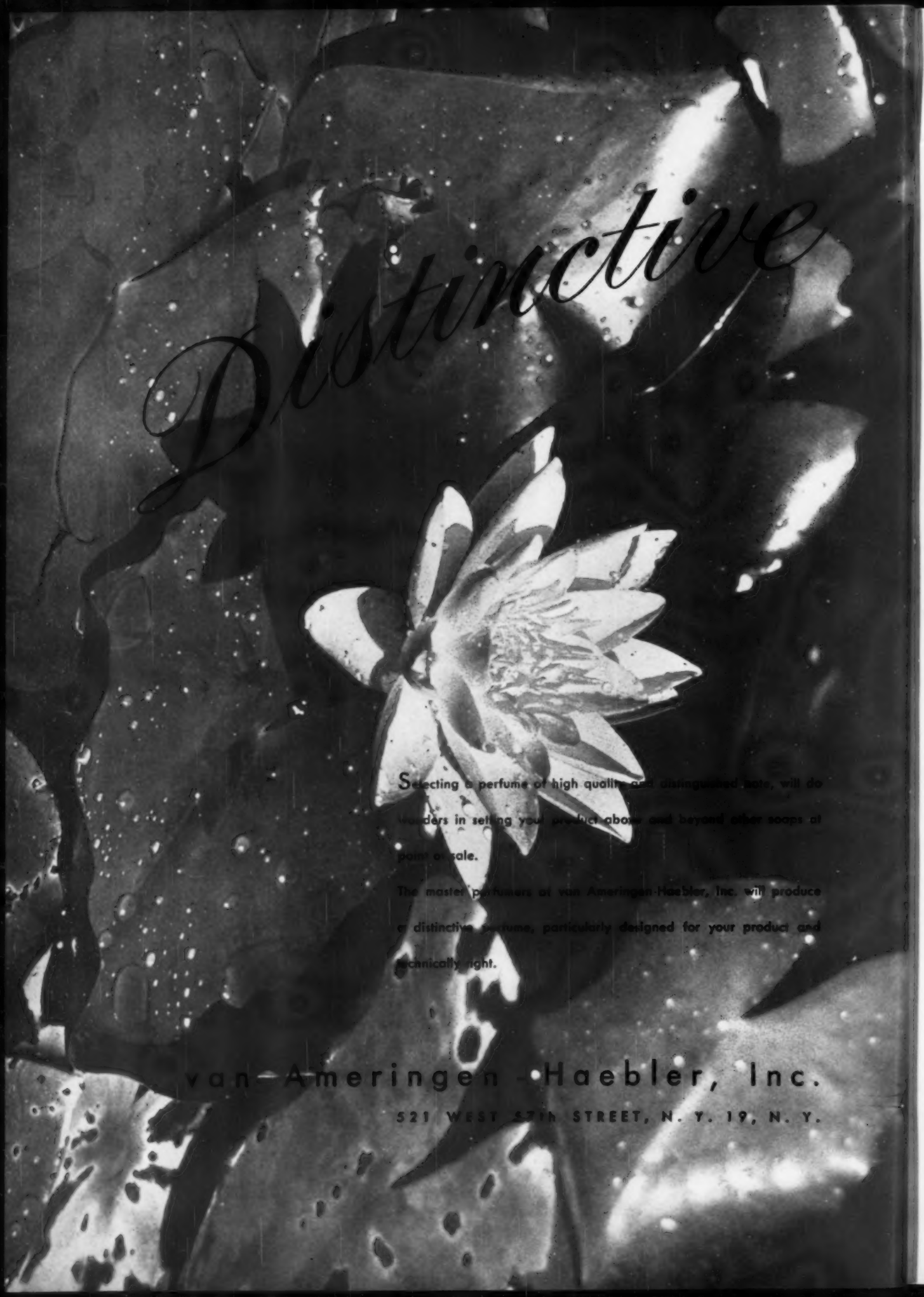
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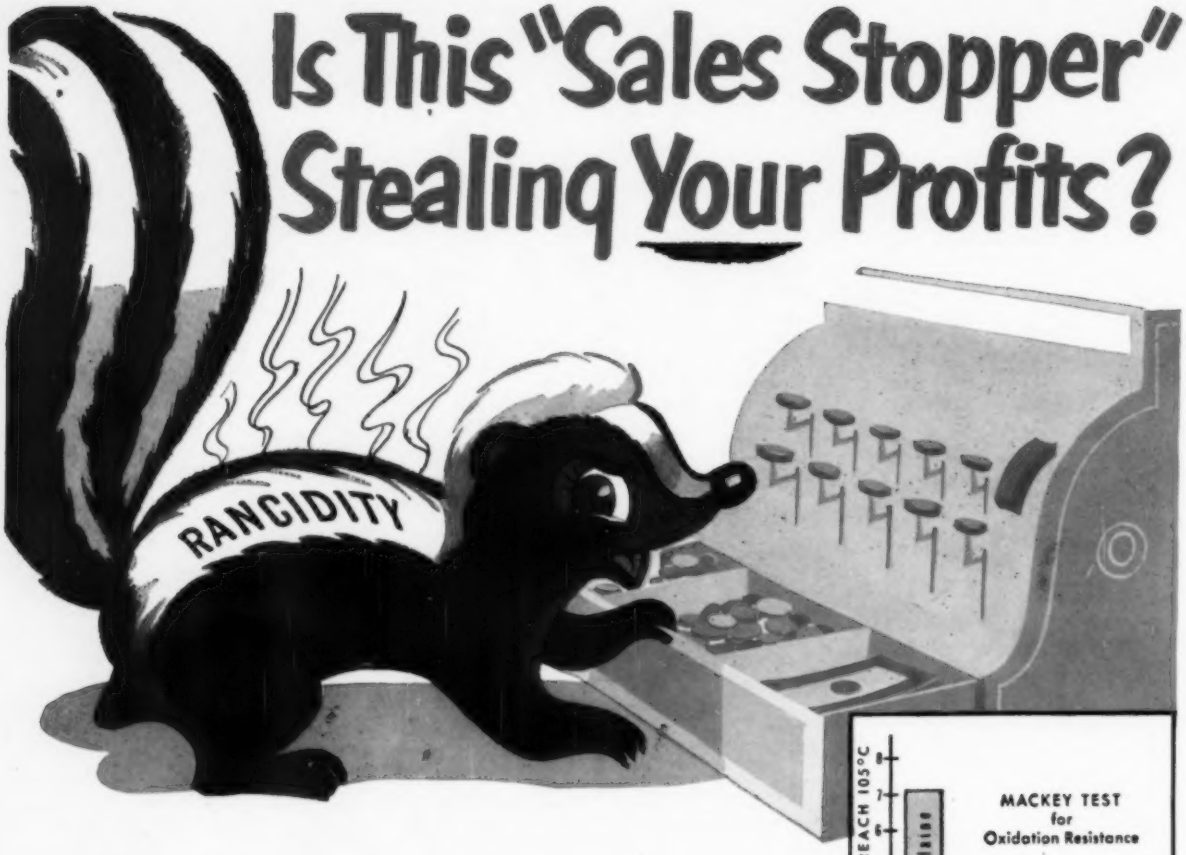
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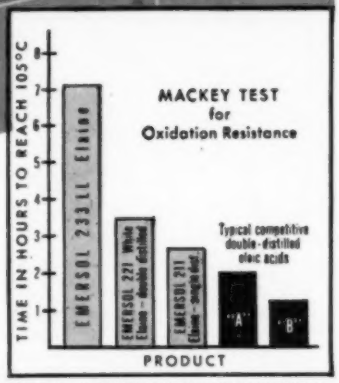
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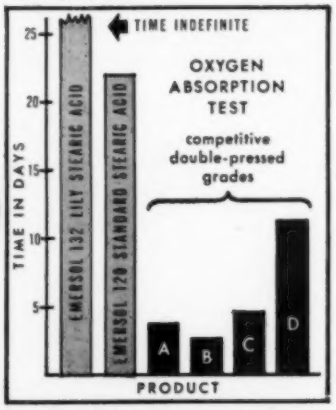
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CALCOFLUOR WHITE 4B	slightly greenish blue	excellent	no effect	cotton, viscose
CALCOFLUOR WHITE RW	neutral blue	fair	strong whitening	nylon, acetate, wool

Write for further details and samples.

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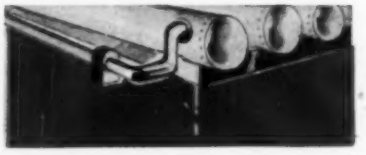
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Sure Step Wax—Solves An Old Problem

Sure Step Wax outmodes all ordinary anti-slip floor waxes, with their dull, gummy and tacky surfaces. Sure Step Wax has been discovered to definitely do a better job because it combines safety plus long-lasting, wearing qualities. Requires only 20 minutes to dry to a mirror-like finish. Sure Step Wax will last longer, costs less to clean and maintain.



In 15, 30, 55 gal. drums; 5 gal. cans.

LISTED UNDER REEXAMINATION SERVICE UL OF UNDERWRITERS' LABORATORIES, INC.

WRITE FOR SAMPLES, specifications and prices.

* Trade Mark of E. I. DU PONT de Nemours & Co., Inc. Reg. U. S. Pat. Off.

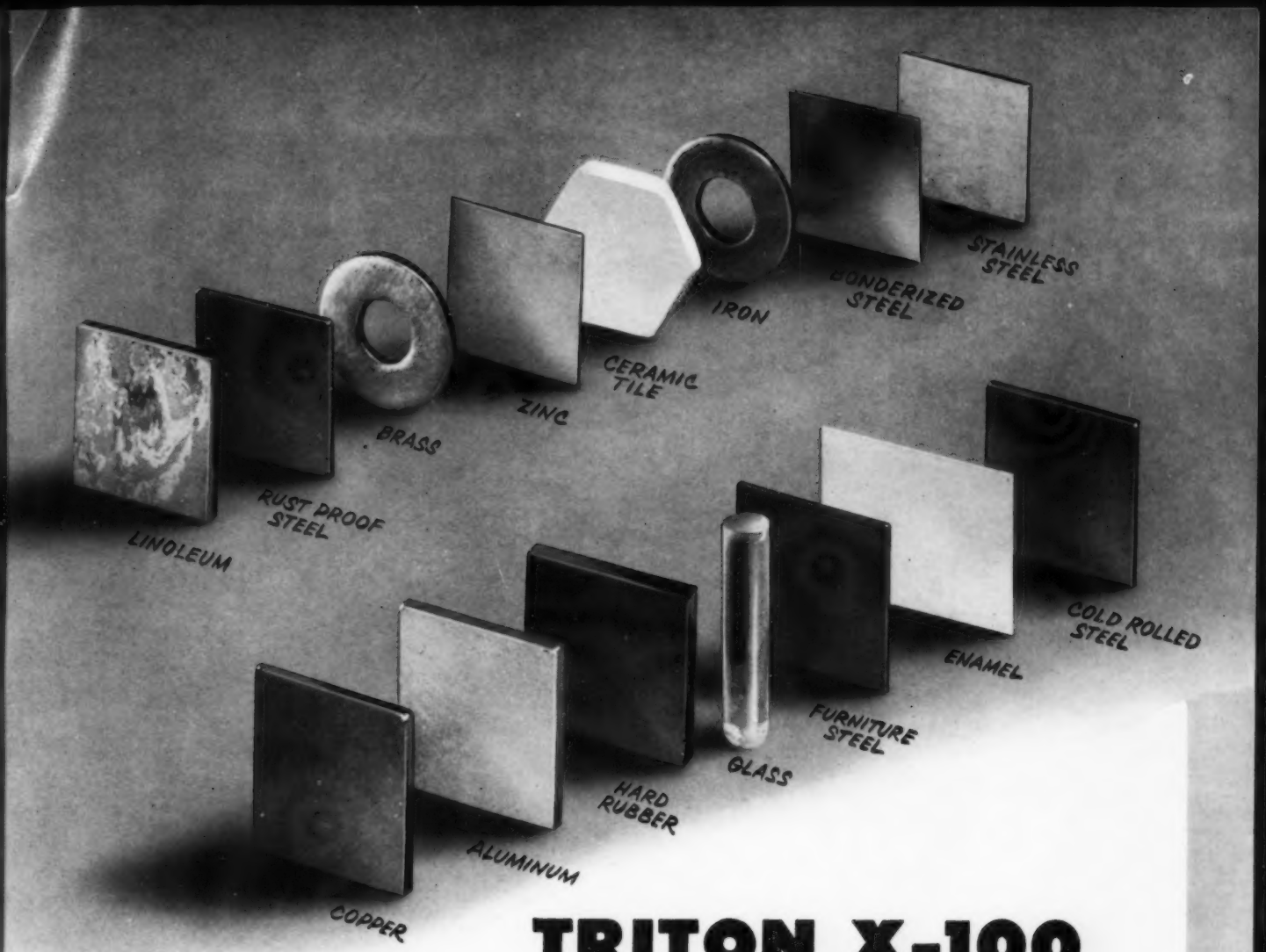
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Cleans them all

Laboratory and field tests prove the superiority of TRITON X-100 as a cleaner on many different hard surfaces.

Is your product used in any of the following fields?

Metal cleaning prior to the plating or the application of protective coatings.

Janitorial work on tough-to-clean ceramic tile, linoleum or enamelled surfaces.

Restaurant washing of greasy china, glassware, aluminum and steel.

If so, you will improve its performance by including TRITON X-100 in your formula.

TRITON X-100 is effective both as a liquid detergent and also when built on powdered alkalies. Its outstanding soil removal and soil suspension properties will greatly help your product in solving your customers' cleaning problems.

Rohm & Haas technical data and formulation suggestions with TRITON X-100 are yours for the asking.

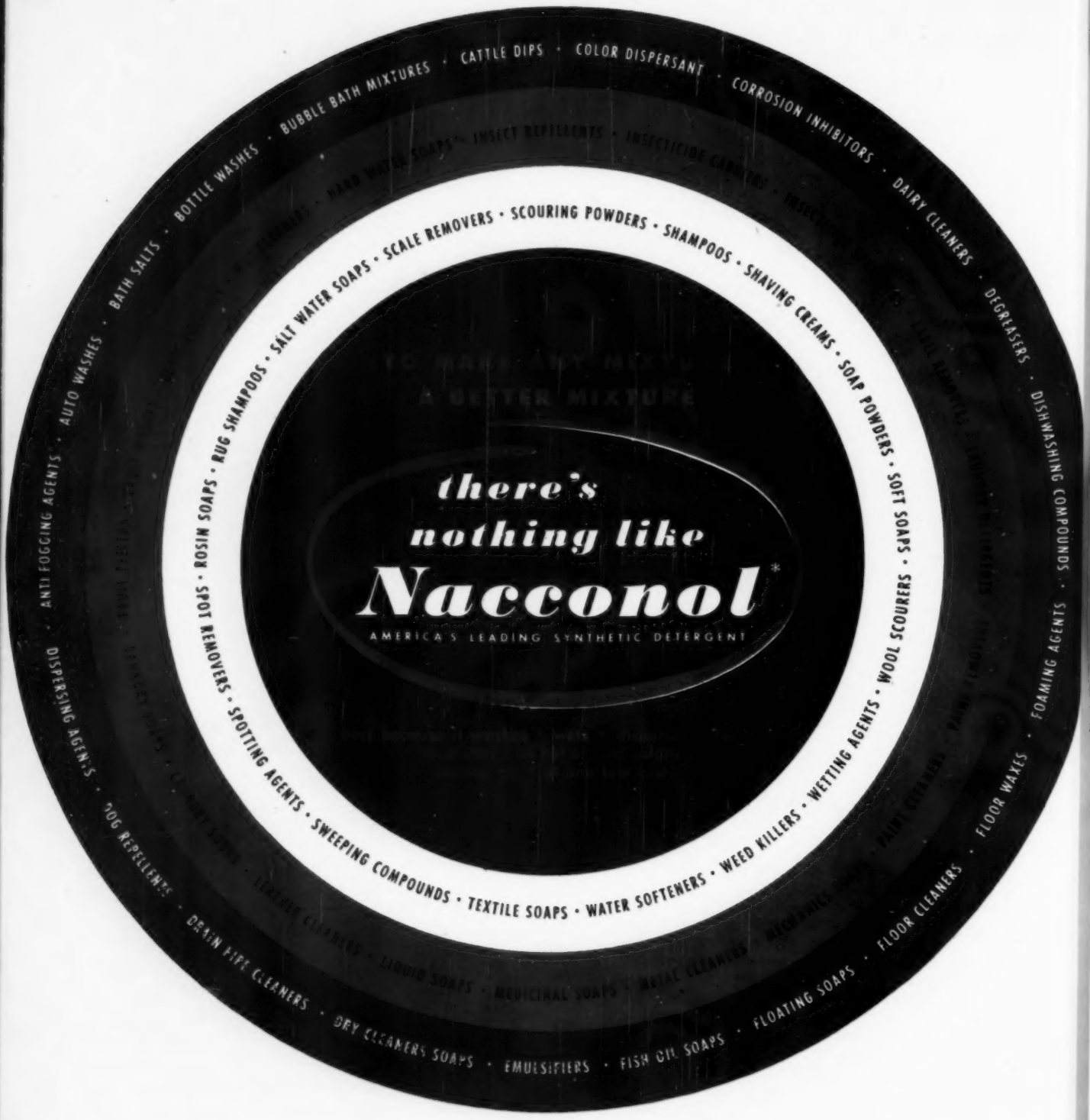
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BUY IT FOR LESS

Than it would cost you to make it!

EXP

High-lathering Detergent for hand dishwashing

Available in
25-lb., 50-lb., 125-lb., and 325-lb. sizes.

If you formulate a dishwashing detergent, check your costs against the delivered price of EXP. Many have found it more economical to use EXP rather than to try to develop a detergent of comparable quality.

With EXP you have a proved product. It's the largest selling, high-lathering hand dishwashing detergent sold commercially. And it's available for your own label. You and your customers will like EXP's advantages:

1. **Higher sudsing**
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4. **Uniform quality always through laboratory control.**

Millions of pounds of EXP are sold every year at a nice profit to dealers. Let it prove itself with a trial order. Use coupon for 125-lb. drum at the lower pound price of a 325-lb. order.

SPECIAL TRIAL ORDER

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Also available in 5-lb. packages under the brand label PEPCO No. 463. Packed eight 5-lbs. to case.

Peck's
PRODUCTS COMPANY
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Manufacturers of Soaps, Detergents, Sanitary Chemicals

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Ship 125-lb. drum of EXP. Bill at special price—same price per pound as on 325-lb. order.

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THE ECONOMICAL DETERGENT SILICATE

Cowles DRYMET, anhydrous sodium metasilicate, is the most highly concentrated form of sodium metasilicate available. One pound of DRYMET is equivalent to 1.6 lbs. of sodium metasilicate pentahydrate. DRYMET contains no water of crystallization. It is more economical to use, on the basis of both Na_2O (alkalinity) and SiO_2 (silicate), than any other type of hydrated or anhydrous detergent silicate, either compounded or by itself.

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DRYMET
IS USED IN COMPOUNDING SUCH PRODUCTS AS:

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6. General Purpose Cleaners
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1. Reinforces "wetting-out" action
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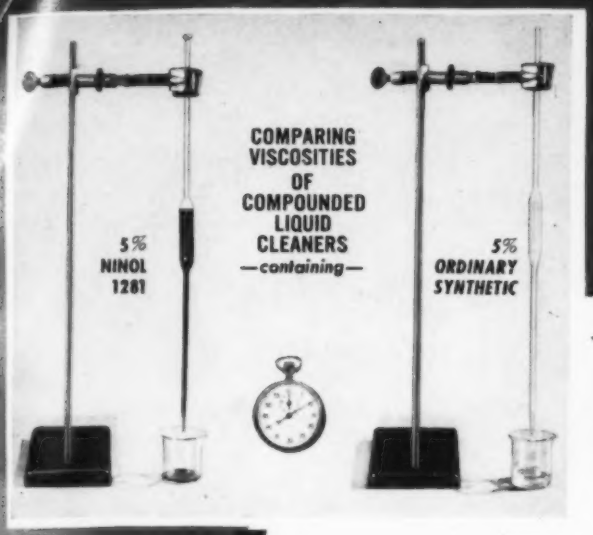


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for

HIGH VISCOSITY *in* LIQUID CLEANERS

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NINOL 1281 *a nonionic detergent with high* THICKENING POWER

Increase the sales appeal of your liquid cleaner line by eliminating that thin, watery look. NINOL 1281 in your formulations will give good "body" both to *Synsoaps** and to all-synthetic liquid cleaners (such as dishwashing detergents, floor cleaners, shampoos, etc.).

Besides thickening action, NINOL 1281 also possesses excellent detergency, rinsibility and rust-inhibiting qualities that make it unique among the synthetics.

OTHER NINOL PRODUCTS FOR SPECIAL THICKENING JOBS

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*SYNSOAPS = Soap + Synthetics

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Please send me, at once, full information about the use of

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☐ 1281 ☐ 2012A ☐ 201
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in formulating liquid cleaners, together with a working sample.

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IGEPALS®

Antara IGEPALS range in cloudpoint from 43° C to over 100° C—which makes these nonionic surfactants about ideal for application under all temperature conditions. The 12 IGEPALS in the series provide detergency, emulsification, wetting and dispersing action with low or high foam, in hard water or soft.

The possibilities inherent in this "temperature-tailored" series of surfactants are virtually unlimited. Let Antara's technically trained sales force advise you as to which IGEPAL or combination of IGEPALS best fits your problem.

IGEPALS...*polyoxyethylated surfactants*

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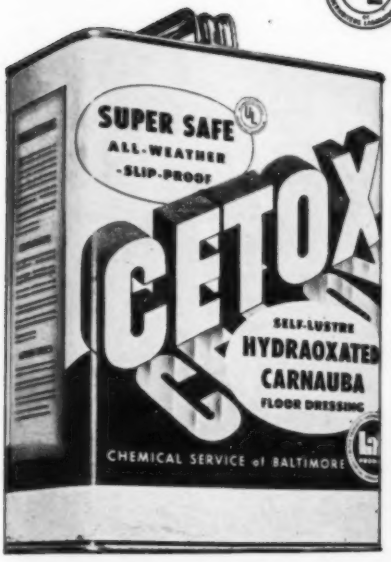
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CETOX the Hydraoxated carnauba floor dressing that's extra safe all year 'round!



CETOX makes all floors super safe —especially throughout year's 30% inclement weather when the risk of slips and falls is greatest.

Super safe—even under wet shoes

Normally, water underfoot acts as a lubricant. CETOX is extra safe under spilled or tracked in water. You simply won't slip, because CETOX contains Carnauba with the slip hydraoxated out of it. No silicas, or abrasives added. *It's hydraoxated super safe!*

Beautiful and safe

Self lustre CETOX makes floors dazzling bright. It is a wet mop proof, tough wearing, dirt resisting, protective floor dressing that may readily be removed with the use of a mild detergent. In every way, CETOX is superior. For safety sake . . . put CETOX on your floors.

Listed by UNDERWRITERS' LABORATORIES, INC. as anti-slip floor treatment material.

Tested-approved by YORK RESEARCH CORPORATION for American Hotel Association.

Write for complete information and sample. Do it today!

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CITROVIOL

DESCRIPTION

An aromatic chemical, nearly water white in color, with a smooth citrus-wood topnote and body. Soluble in 95% ethanol and all essential oils.

a tested soap aromatic

The excellent stability and lasting quality of *Citroviol* make it exceptionally valuable as an intensifier for soap perfumes.

Citroviol has been used successfully in concentrations from 3% to 10%, in extending Lilac, Violet, Rose, and many other floral bouquets.

In soap *Citroviol* has more body and lasts longer than does Linalyl Acetate. Also of great interest to the trade is the use of *Citroviol* as a replacement for the fullness of Bergamot.

CITROVIOL is also an excellent blender of Aldehydic notes. Used up to 20% in colognes, it makes a fresh bouquet brighter and more lasting. Write us on your company letterhead for a complimentary sample.

The Dow Chemical Company

Aromatics Division • 629 Grove Street, • Jersey City 2, N. J.
Dow Chemical of Canada, Limited, Toronto, Canada

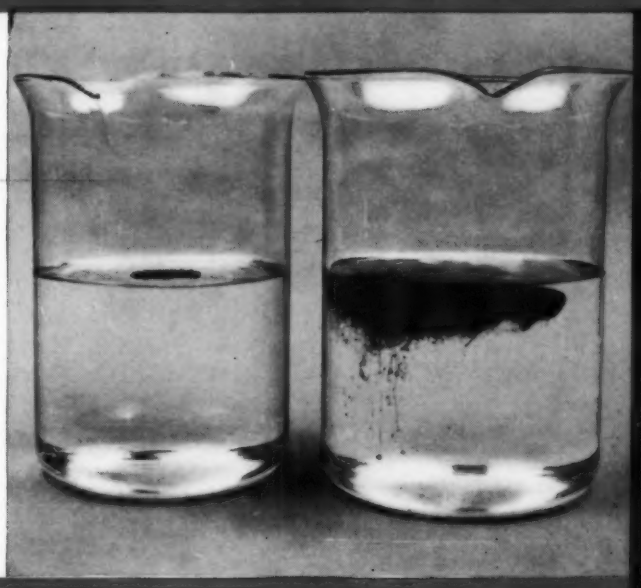
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ULTRAWET Detergents Mean Quality

Synthetic detergents with the highest performance returns

THE ULTRAWETS



Graphite floating on water — Graphite dispersed in ULTRAWET

Atlantic makes a wide range of alkyl aryl sulfonates we've called ULTRAWETS. We can't always tell you that our ULTRAWETS are the lowest priced. We *can* tell you no one can touch the ULTRAWETS for *quality*.

With surface active detergents, your saving comes – not from the initial price – but from the kind of results you get during use. The quality of the ULTRAWETS brings you a new high in value. Whether you buy them in liquid, flake or bead form . . . whether you want cleaning, wetting, emulsifying, dispersing or penetrating properties . . . you can be sure the ULTRAWETS and Atlantic know-how will give you the *best* performance.

If you'd like to know more about the ULTRAWETS . . . what they are . . . what they can do . . . what package or amount they can be ordered in . . . and the answers to any other questions, write The Atlantic Refining Company, Chemical Products Section, Dept. D-9, 260 So. Broad St., Philadelphia 1, Pa.

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Philadelphia • Pittsburgh • Charlotte
Chicago

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ATLANTIC PETROLEUM CHEMICALS

Please send complete details on ULTRAWETS.

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Attention: Soapers and Mixers

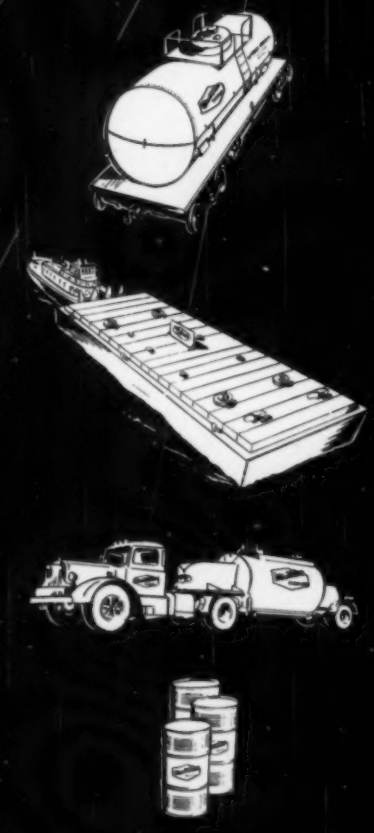
No other integrated producer offers the same combination of basic chemicals, technical help, delivery and packaging as

Westvaco

Now is the time to line up with one dependable source for your basic needs on alkalis, phosphates and dry mixtures.

When you select Westvaco as your primary supplier, you won't have to shop for spot stocks when business is brisk. You won't have to adjust your output to the fluctuating market availability of any one chemical in your formula. You will have a dependable connection with an enviable reputation for delivery as promised from growing, integrated plants. You will get practical, helpful technical service on handling and formulation. You will have a wide choice of packaging — by the barge, tank car, hopper car, tank truck, drum or bag, whichever is most economical for you.

Best of all, you'll be doing business with a friendly group having a real interest in your problems and basic chemical needs, whether the market is short or long. Yes, this is the time to get set for the year after tomorrow!



CAUSTIC SODA

Liquid 50% Standard and Rayon Grades
Liquid 70-73% Standard Grade
Flake and Solid, 76% No. 0

CAUSTIC POTASH

25% Liquid, Flake and Solid

NATURAL SODA ASH

Light and Dense

Crude Sodium Sesquicarbonate
Acid Sodium Pyrophosphate
Food and Technical Grades
Disodium Phosphate
Monosodium Phosphate
Sodium Tripolyphosphate
Tetrasodium Pyrophosphate
Phosphated Caustic Soda
Chlorinated Phosphate
Dipotassium Phosphate
Monopotassium Phosphate
Potassium Phosphate Liquor
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Mixtures containing phosphates, alkalis, detergents, etc. formulated to order

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FOOD MACHINERY AND CHEMICAL CORPORATION
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YOU CAN'T BUY A BETTER DETERGENT THAN

D-40

ORONITE CHEMICAL COMPANY

THE NAME TO WATCH IN CHEMICALS ®

COMPARE Oronite D-40 any way you like—for emulsifying fats and greases, for reducing surface and interfacial tension, for efficiency in strong acid or alkaline solutions. You'll always come up with the same answer. There just isn't any better all-around detergent than D-40.

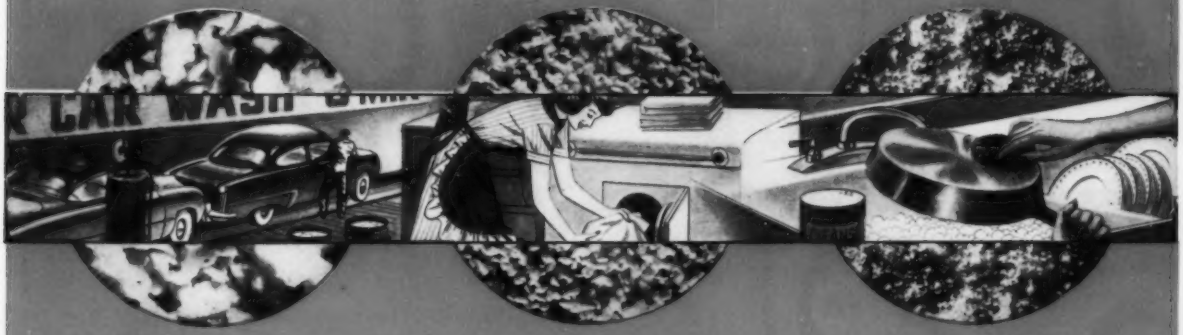
That's why so many re-packagers and compounders of washing powders, scouring cleansers and industrial cleaning compounds stick to D-40. They know they can depend on its high quality and uniformity.

Write or telephone the Oronite office nearest you for full information.

D-40 is available in 3 particle sizes

Flakes, granules, powder—all are of the same high quality and purity. Use the one that best fits your requirements.

Photographs show D-40 particle sizes enlarged 5 times.



D-40SF (Flakes) D-40 (Granules) D-40FG (Powder)

The quality and performance of detergent materials made by Oronite have been proved in more than a billion pounds of household and industrial cleaning compounds. Large-scale production facilities and experience provide Oronite the background for better detergents.

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Hercules CMC-CT works two ways—as a laundry size or as a whiteness retention and soil removal agent in soaps and detergents. CMC-CT helps soaps and detergents wash clothes whiter in single washes, in repeated launderings, or when suds are re-used for several washes. Commercial laundry operators experience fewer rejects and fewer rewashes. The new "look" in laundry size—CMC-CT—gives outstanding advantages such as higher quality finish, ease of ironing, washing ease, increased soil resistance, and whiteness retention. Write for free testing sample and technical booklet.

Cellulose Products Department

HERCULES POWDER COMPANY

INCORPORATED

961 Market Street, Wilmington 99, Delaware

CM52-4

. . . in brief

as the editor sees it . . .

WHITHER PRICES? . . . The next move of soap prices generally could be upward. They have been bumping along at what look like bottom levels for some weeks, as have fatty raw materials. Judging from price control talk in Washington, the opinion prevails there that the price situation is somewhat over-done on the low side. For over six months, demand for all types of soap has been flat. More recently, evidence of buying interest has been noted, even though it has been spotty and of a minor character. Any material increase in demand in the near future would be likely to bring an immediate response in higher prices. The fact that some soapers are refusing to go below the price levels of recent weeks, even in the face of firm orders, and are putting soap in warehouses in anticipation of better prices, may be a significant straw in the wind.

SALES STIMULUS . . . The time to buy anything is when it is kicking around at a low price and nobody wants it. But who wants to buy at such a time? Always, the argument presents itself that the price, having gone so low, may go lower. But, where there is some evidence that a decline may have run its course and the next move of prices might be upward, reasons to buy obviously are enhanced. This could be the situation today in soaps and kindred products. At any rate, the chances of a material further decline from current levels is remote. A soap buyer's position right now is about as reasonably safe as it could be, as we weigh the evidence. A salesman is probably on solid ground in recommending to his best customers that they give serious thought to covering some requirements ahead. The chances of buying soap advantageously are better than they have been in two years. If this isn't a cue to soapers to start some hard selling, then why not? Maybe those who have taken a beating for a year or more would rather do their selling *after* prices have moved upward from present levels. Could be.

INVENTORIES . . . We hear conflicting reports on inventories. Some manufacturers hold that they still have too much of everything on hand. But, on the whole, we have a hunch that in and around the soap, cleanser, floor wax, and allied fields, numerous inventories have been permitted to fall to dangerously low levels. Why buy? Stocks are plentiful, except in isolated cases; credits are not too free, so let's keep the money in the bank; prices may stay down for a long time or go lower. Who knows? However, the status of inventories of both raw and finished materials is closely tied in with price possibilities. Increased demand for one or two items could start things rolling. A price increase here and there, and we're off for the races. As for us, we wouldn't feel wholly comfortable with too many empty tanks along about here.

WAX MYSTIC MAZE . . . New developments in floor wax formulation have come with such unusual rapidity over the past few years that the average marketer has had difficulty in keeping pace with the trend.

Where once carnauba wax was the main and sometimes the only wax-like constituent, today it has dropped far down the list in importance. Some floor wax manufacturers have eliminated it completely. New waxes, resins and other additives have come to the front. The character of floor waxes generally has shown a wide change. Hundreds of new formulations have come to market and new ones are appearing almost daily. They vary widely in suitability for innumerable floor maintenance jobs and present considerable of a puzzle to the marketer and user. But the problems of slip and water spotting seem to be getting closer to solution as time goes on. In this mystic maze of new and ever-changing products, we feel that it behooves the bulk wax buyer to watch his step. Sometimes it's tough to separate the chaff from the wheat.

NO RESEARCH . . . With tallow and grease prices at low ebb and the visible supply excessive, the long-range outlook is not bright. The tendency seems to be to blame everybody, mostly the soap manufacturer, for the plight of the tallow producer today. Such steps as have been taken to remedy the situation, as far as we can see, have been political in nature—attempts to legislate animal fats into prosperity. Faced with the possibility of a similar situation a quarter-century ago in glycerine, plus the threat of synthetic glycerine, a relationship akin to synthetic detergents with tallow, soapers and fat splitters spent a small fortune on research down through the years. It has paid off. Today, we feel that tallow and grease are paying the price for research *not done* twenty years ago—not to mention a disorganized marketing procedure. It's going to require a long time for the present upsurge in fat chemistry to take up the slack faced by basic fat producers.

HOT VAPORIZERS . . . Controversy over the ever-widening sale of insecticide vaporizing devices gets hotter. Significant is the symposium on the Insecticide Division program at the current mid-year meeting of the Chemical Specialties Manufacturers Association. Significant also is a statement in a release from the Pesticide Committee of the American Medical Association that these devices "should be supplanted by more acceptable means of insect control."

Although some members of the industry agree with this AMA conclusion, they resent AMA intrusion into the affairs of insecticide manufacturers. Our own view is that, with all due respect for the non-medical experts on the Pesticide Committee, AMA as usual strains at a gnat but swallows a camel. We hold no brief for this wide exploitation of faulty vaporizers by fly-by-nights which we now face. But, we still maintain that those devices which are properly controlled have many safe and effective uses. Because two men carved each other up in a hotel kitchen yesterday, we see no reason for a ban on the sale or proper use of knives.

THAT NEW LABEL . . . Invariably when a new product is launched by a firm inexperienced in a field, advertising and label claims run the gamut from soup to nuts. Usually the offenders are smaller firms. Larger outfits generally are more circumspect. The product may be a shampoo, a dentifrice, a soap, a deodorant, or what not,—but it will do everything from shining up the kitchen sink to curing acne or fallen arches. Claims are tossed hither and yon with a free abandon, a not uncommon practice in this age of incredible advertising nonsense.

All may go well if the Department of Agriculture, Food & Drug Administration, or even the Federal Trade Commission don't get snoopy, as they have a habit of doing. The marketer unwittingly in his enthusiasm may be putting his new product directly under the Food, Drug & Cosmetic Act, or the Insecticide Act. This means there are requirements about which he obviously does not know. So, the moral of this tale is that if you put out a new product, or revamp a label, even if it's for a shoe polish, consult an expert. If you don't know one, ask us. We'll be glad to refer you to one.

as the reader sees it . . .

On Vaporizer Editorial

Editor:

On behalf of the company responsible for national promotion of the first low priced insecticide vaporizer, may we take this opportunity to applaud the editorial regarding vaporization that appeared in the April issue of *Soap & Sanitary Chemicals*.

The writer was responsible for the introduction of this system in the U. S. many years ago and may we advise you that there never has been to our knowledge any detrimental effects from the use of any of these vaporizers.

Vaporizers are a technological advancement in the field of pest control, they are taking the place of services rendered by an individual at an extremely high price. Vaporizers are doing a job superior to this individual and costing far less than the charges for the same service. There is little doubt that the National Pest Control Association has felt some pressure from its members and is attempting to use a pessimistic attitude with the federal health authorities in attempting to control the sale of automatic vaporizers to a mere minimum.

Clear thinking editorials such as the one that appeared in your magazine will aid in advising the American public of this fact and will result in healthier and cleaner establishments through the use of this automatic equipment.

L. M. Kissner,
De-Bug-Er, Inc.,
Madison, Wis.

* * *

Thanks for your kind words, Mr. Kissner. It seems that everybody is now getting in on the vaporizer act,—not to mention the FDA, USDA, NPCA, CSMA,—and now the American Medical Assn.—all certain to add more confusion to an already confused situation.—Ed.

———•———

Small Soap Maker

Editor:

Your articles, "In Brief," have been of keen interest to me, in spite of the fact that I'm one of those individuals who has taken the brunt of your satire—"a small soap manufacturer and jobber." No, not a fly-by-night or a plain gyp, as you have so graphically described the group I represent, but a small business man who knows his territory. A territory learned, in a great measure, through extending every effort to find business for the big manufacturer—to our mutual benefit and profit. A territory learned through making friends of my customers. And, there must be many more like me. I dare not break faith with these friends, because, you see, I live here and work out the customer's problem on his home ground.

I've been a jobber and manufacturer in the San Diego territory for fifteen years. I've sold products manufactured by "big name" industry. To meet the challenge of specialized processing, and local industry cleaning problems, I entered the compounding field. Raw chemicals from nationally recognized manufacturers are blended together in our custom-mix compounds, and, since our finished products, are only as good as their component parts, we choose our supplier carefully.

I've often wondered why you have taken it upon yourself, and used your talented gift of word power to judge without trial the little player in this big game of Soap! Can it be that the giant advertiser has influenced your opinion? Or, have you jumped to a conclusion without knowing the facts?

Thanks, however, for the break you gave us in April *Soap*. You've been wearing armor steeled against the small manufacturer, but, you're opening the visor and light is penetrating. Remember, you wrote: "And accordingly, the need for the manufacturer to circumvent the jobber, and go directly to the consumer, grows less with each passing month."

Perhaps, some day, when you have learned to understand the selling game at the end of the line, where it is actually used, we may have the honor of a "Soapy Corner" for ourselves in *Soap*.

(*Turn to Page* 199)



"No more washer trouble, Mrs. McGuff. Our new detergent has pure axlegrease scientifically blended right in!"

New Look at Floor Cleaners

FOR some time, the name "scrub" soap has implied a liquid soap solution of not particularly high quality. Within recent years more attention has been given to such products and several papers have pointed out the fact that manufacturers of such cleaners are not satisfied to leave these soaps in the nondescript class. (2) (4) (5) The papers have been devoted to methods of evaluating these compounds on a performance basis with the end purpose being to determine what types of soaps are best for soil removal and therefore to give such soaps an identity on the basis of performance. Naturally, the synthetic detergents entered the picture and as would be expected, there was a difference in opinions as to preference. The differences in results obtained with soaps versus synthetics for floor cleaning are due to the many complicated factors involved in evaluation but, probably, more basic is the fact that the synthetic is not being built specifically for this purpose. It has been found by some investigators that the synthetics can perform well for floor cleaning. (4) (7) It is exactly the same situation which exists in many other cleaning operations.

There is no doubt that the flexibility and stability properties of the synthetics have certain definite advantages. Since the fundamental requirement is the removal of soil, the flexibility advantages of the synthetics would be reduced in importance if the detergency or soil removal qualities of synthetics are less than those of soaps. The answer to the soil removal question for synthetics is proper formulation to obtain maximum performance, which is true in the case of soaps. As in other cleaning operations, a properly compounded synthetic will perform as well as soaps for floor cleaning and the enhanced rinsability characteristics give the synthetic some plus values.

With published information available and based on our experience in compounding synthetics for particular applications, the aim of our investigation of detergency efficiency was to try to verify this information under actual practice conditions. It isn't too difficult to set up a test of this kind, but the results of such tests are not clearly defined and it is impossible to assign a relative order of cleaning efficiency where minor differences exist. Frankly, on lightly soiled floors it is difficult to find any variation between cleaners. On heavily soiled floors, a difference can be discerned between cleaners as to performance. Once a formulation has gone through a series of evaluations of this kind, then it is submitted to a number of different locations for use on a variety of floors and by different operators. Care has to be taken in selection of these locations in order to get a good test and an unbiased report. With proper preliminary screening, this panel-type test appears to be entirely satisfactory.

Effect on Floor

THE property that has become of much concern to us — even more than detergency — is the effect of the floor cleaner on the floor itself. There seems to be no factual information on this point and apparently not much effort has been made to investigate cleaners for "use safety". The only work reported along this line was by Trusler (4). This does not mean that there is a shortage of opinions or stories in the trade about effects of cleaners on floors. This is not at all normal, since, in the textile detergent field, for example, considerable time and effort are devoted to scouring effects on goods. The Asphalt Tile Institute in its recommended specifications (8) has included a section on deleterious action. It is very desirable to know about this property in cleaners. The National Bureau of Standards (6) has recently published some similar work using the Tabor Abraser method. Even though the NBS obtained factual measurements, the rating system, excellent, good, fair, etc., was used for reporting results. This seems to be the best method for handling such data and we have used this method. We would have liked to explore the Taber method for measuring attack in conjection with some of the techniques that were developed.

We would like to explore more closely the factors of contact time and concentration by this method which should show relative effects before obvious signs of deterioration are evident. The concentration time factors are very important as maintenance men are not always the most exacting in their measuring and usually not too expedient in picking up the cleaner solution from the floor. For an accelerated test which will show effects of detergent usage over a long period of time, the exposure time should be extended over several days, arbitrarily one to two weeks. Repeated use of a cleaner and incomplete pick-up will probably give a surprising length of contact over a period of time during the actual usage.

During the course of evaluating several different types of cleaner, it was found that asphalt tile strips submerged in solutions of the cleaners caused fading of the colors with some of the solutions, whereas others caused little or no fading. Some of the solutions developed a heavy precipitate while others remained perfectly clear. Linoleum tile when subjected only to surface exposure with the cleaners showed some very pronounced effects on the surface. On the basis of these preliminary results, we began to take a closer look at this matter.

Unfortunately, we did not have adequate equipment available for do-

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* Paper presented at 38th midyear meeting C.S.M.A., Boston, June 10, 1952.

By Louis E. Wells, Jr.*
Peck's Products Co.



ing this test work as scientifically as it should be done. The problem seemed to grow on us as we went along. Weight loss measurements were unsatisfactory and we resorted to visual examinations of surface effects and color changes.

Tables I, II, and III show the results of the visual inspection tests. Where samples were submerged, strips of the tile were covered with the solution in a closed bottle. All tests were made at room conditions. Where only the surface of the tile was exposed, cellulose sponges were placed in contact with the surface and these sponges were kept moistened with the solution. Materials were examined which are, or appear to be, of most interest for use in formulating floor cleaners. The types of flooring materials under examination were principally the soft types such as asphalt, linoleum, plastic and rubber tile. Some work was done on hard surfaces such as marble and terrazzo. This kind of cleaning does not apply to wood floors.

Linoleum

IN Table I, the battleship linoleum (a pastel green) samples which were submerged gave much the same results as the linoleum where the cleaner was in contact with the surface. The submersion tests were conducted in one to 10 dilutions whereas the contact tests were made with the undiluted cleaner. This would appear to be rather rigorous treatment but it does show a relationship between different types of cleaners. Where severe attack is noted (xxx), the surface is badly roughened and when damp the roughened area appears very dark. The "pronounced effect" as noted by (xx) is simply a lesser degree of the severe attack. The slight effect (x) is a color change or mottling effect on the surface without any apparent roughening. No effect means comparison with the original tile does not show any change whatsoever. It does seem remarkable that some cleaners show no effect on the linoleum.

Some work was done with some of these same cleaners on dark green and bright red linoleum tile. The results were generally in the same order of magnitude, and these different kinds and colors looked much the same after exposure. The squares (dark green and red) had only the surface in contact with the solution. One convenient part of using sponges is the control of the area to be exposed and an untouched surface immediately adjacent for comparison purposes.

The results in Table I show linoleum to be most severely attacked by the soaps which are the more alkaline materials in the group. This would be expected since linoleum contains a polymerized vegetable oil which can be saponified. This agrees with the information reported by the National Bureau of Standards data (6) which showed linoleum to have only a "fair" rating on resistance to a soap cleaner.

Also, it has been reported (7) that both an amine condensate and a soap at full strength have a softening effect on white linoleum after 48 hours exposure. Our results check this very well showing much the same effect for these two types of materials after three days.

In Table III, the effect of cleaners on linoleum is shown where alkali is added to the neutral type surface active agents.

Rubber Tile

THE results for rubber tile are contrasted with those for linoleum in Table I. Only in a few instances was there obvious attack on rubber. Attacks on rubber tile were evident in the forms of swelling, softening, or roughening of surface, which resulted principally from soap use. Color stability was very good for these colors of rubber tile used. In all tests where rubber tile are submerged for any length of time, soap solutions invariably leave a white deposit in the pores which is undoubtedly a metallic soap.

Trusler (4) has pointed out that rubber flooring may be hurt under some circumstances by highly alkaline cleaners. This is shown in the NBS report (6) indicating that against three alkaline materials, rubber is most resistant to trisodium phosphate, less resistant to soap, soda ash cleaner, and caustic soda in that order.

Asphalt Tile

SUBMERSION of asphalt tile in one to 10 dilutions of cleaners for two weeks at room conditions is a rigorous test. Some of the samples were practically decomposed. Others were very nearly in their original con-

TABLE I
Comparing Effects of Various Types of Surface Active Agents on Floor Coverings

CONCENTRATION OF CLEANER	BATTLESHIP LINOLEUM — Submerged 1 to 10	BATTLESHIP LINOLEUM — Surface Contact As Is	RUBBER TILE — Blue Submerged 1 to 10	RUBBER TILE — Red Submerged 1 to 10
1. Neutral Type Potassium Soap — 20%	xxx	xxx (3 days)	x	xx
2. Neutral Type Triethanolamine Soap — 20%	xxx	xxx (3 days)	xx	xxx
3. Alkyl aryl sulfonate — sodium salt — 20%	o	x	o	o
4. Alkyl aryl sulfonate — TEA salt 20%	o	x	o	o
5. Alkyl sulfate — sodium salt 20%	x	x	o	o
6. Sodium dioctyl sulfosuccinate — 20%	xx	x	o	x
7. Amine condensate — 20%	x	xx (3 days)	o	xx
8. Nonionic — tall oil — ethylene oxide 20%	o	x	o	o
9. Nonionic — alkyl phenol — ethylene oxide 20%	x	x	x	o
10. Nonionic — poly oxyethylene thioether 20%	o	x	o	o
11. Product A — Soap type	xxx	xxx (3 days)	x	xx
12. Product B — Soap type	xxx	xxx (3 days)	x	xx
13. Product C — Synthetic type	xx	x (3 days)	o	o
14. Product D — Synthetic type	o	x	o	o
15. Product E — Synthetic type	o	o	o	o
16. Water	o	o	o	o

xxx — Severe attack of surface
xx — Pronounced effect on surface
x — Slight effect
o — No effect

Battleship linoleum (submerged) for two weeks in 1 to 10 dilutions.
Battleship linoleum (surface contact only) Number in parenthesis indicates days for effect to show up. Rating after two weeks is shown by x's.
————Rubber tile — submerged in 1 to 10 dilution for two weeks.

dition. One factor which seems to make a great deal of difference in the way the tile withstands the cleaners is the color pigment used for the tile. Some colors seem to be much more susceptible to attack by the cleaners. Note in Table II that the samples of blue and green asphalt showed a slight effect (x) in water which was due to a pronounced fading of the color over the two week period. Blue and green colors in asphalt tile seem to have very poor color stability. Of course, this stability would probably vary somewhat with tile from different manufacturers. No attempt was made to select different brands of asphalt tile for comparison as this would require a much more involved program, and for obvious reasons, we were not concerned in finding out the relative merits of brands.

For testing, we were careful to cut all pieces for a single series from a single asphalt tile in order to show the proper relationship between cleaners. There seems to be a considerable difference between tiles.

The solutions in which the asphalt tile are submerged will tend to indicate the degree of attack by showing various turbidities. For example, soaps and some synthetic solutions which are clear initially will show turbidity within a few hours. The longer the tile is in solution, the greater the turbidity and in some cases a very heavy precipitate will form. It seems to be a leaching of metallic ions from the pigment and subsequent precipitation of the metallic salts with the surface active agent. The greater removal of metallic ions from the tile and from the solution appears to cause a greater deterioration of the tile.

Alkalinity doesn't seem to be as great a factor on asphalt as does the combination of surface active agent with alkalinity. Referring to the NBS report (6) again, asphalt tile appears to have a greater resistance to trisodium phosphate solution and caustic soda solution than to a soap-soda ash solution.

Plastic Tile

THE plastic tile samples examined showed very little effect when exposed to various cleaners. With the yellow plastic only a slight bleaching or fading of color was found in a few cases and the surface appeared to retain all of its original properties.

Marble and Terrazzo

THESE materials were not investigated as extensively as other types of floor coverings but a few surface exposure tests were made. Such tests were made by contacting the surface with the cleaner by means of a sponge or a small square of cloth. An interesting observation with both marble and terrazzo is that a cleaner which is not too stable to metallic ions seems to have the greatest effect on the surface.

With marble not much alteration of surface is found on contact with various types of cleaners. The soap type cleaners being very reactive to metallic ions gave the surface of the marble a very high gloss. The more stable compounds had little if any effect on the surface.

Terrazzo had a different appearance when exposed to the metallic ion reactive types. There seemed to be more of a roughening and loss of gloss when exposed to metallic salt forming cleaners. This was borne out in a number of field trials where large adjacent areas were cleaned with a soap type as compared with a synthetic type. The synthetic left an attractive sheen on terrazzo whereas the soap type left a dull finish.

Alkaline Builders

TO get some idea as to the effect of alkaline builders, the series shown in Table III was made. Battleship linoleum (a pastel green cut from same piece as used for tests in Table I) was used and the solutions were applied by sponge because this surface lends itself to visual comparisons. It seems that alkaline materials unquestionably increase the attack of the cleaner on linoleum as was mentioned previously. It is interesting to note that a nonionic, alkyl phenol condensate, showing no effect itself in

TABLE II

Comparing Effects of Various Types of Surface Active Agents on Floor Coverings

CONCENTRATION OF CLEANER	ASPHALT TILE				PLASTIC TILE	
	Brown 1 to 10	Yellow 1 to 10	Blue 1 to 10	Green 1 to 10	White 1 to 10	Yellow 1 to 10
1. Neutral Type Potassium Soap — 20%	xxx	xxx	xxx	xxx	o	x (sl. bleaching)
2. Neutral Type Triethanolamine Soap — 20%	xxx	xxx	xxx	xxx	o	x (sl. bleaching)
3. Alkyl aryl sulfonate — sodium salt — 20%	o	xx	xxx	xxx	o	o
4. Alkyl aryl sulfonate — TEA salt 20%	o	x	x	x	o	o
5. Alkyl sulfate — sodium salt 20%	o	x	x	x	o	o
6. Sodium dioctyl sulfosuccinate — 20%	xx	xxx	xxx	xxx	o	o
7. Amine condensate — 20%	xx	x	xx	xx	o	o
8. Nonionic — tall oil — ethylene oxide 20%	o	o	xx	xx	o	o
9. Nonionic — alkyl phenol — ethylene oxide 20%	o	x	x	xxx	o	o
10. Nonionic — poly oxyethylene thioether 20%	o	x	x	xxx	o	o
11. Product A — Soap type	xxx	xxx	xx	xxx	o	x (sl. bleaching)
12. Product B — Soap type	xxx	xx	x	x	o	x (sl. bleaching)
13. Product C — Synthetic type	o	x	x	x	o	o
14. Product D — Synthetic type	o	x	x	xx	o	o (sl. bleaching)
15. Product E — Synthetic type	o	x	x	x	o	o
16. Water	o	o	x	x	o	o

xxx — Severe attack xx — Pronounced effect x — Slight effect o — No effect — Asphalt and plastic tile submerged two weeks.

14 days, will cause some attack almost immediately when alkaline builders are used with it.

Summary

THERE is little question that the type of cleaner used will have a direct effect on the wear and life of a floor. The soaps as used in cleaners at this time would seem to be less desirable from a safety standpoint than the synthetic, but unless the synthetic is properly formulated it will also adversely affect the floor covering and have poor detergency properties as well. The matter of formulating brings another variable into the picture and when this is taken into account the soap types can possibly be built to minimize the action on the floor covering while maintaining good detergency. The synthetic type must be properly built to get good detergency and care should be taken that such "building" does not detract from the safety features.

The detergent industry should recognize this problem as being one of real significance to the consumer. Cooperation between the detergent industry and flooring manufacturers would be a big step forward as the flooring industry can contribute materially with technical information and guidance on this problem which is of mutual interest.

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Soapers on Advertising List

Procter & Gamble Co., Cincinati, and Colgate-Palmolive-Peet Co., Jersey City, are included in the top 10 of the list of 100 leading magazine advertisers of 1951 issued recently by the Magazine Advertising Bureau.

TABLE III

Effects of Alkaline Builder Materials with Surface Active Agents on Floor Covering

BATTLESHIP LINOLEUM SURFACE TREATMENT ONLY

2% Solutions Consisting of:	Exposure Time				
	1 day	3 days	5 days	7 days	14 days
1. Alkyl aryl sulfonate — sodium salt	o	o	o	o	o
2. 75% (1) and 25% Sodium Tripolyphosphate	o	o	o	x	x
3. 75% (1) and 25% Trisodium Phosphate	o	o	o	x	xx
4. 75% (1) and 25% Soda Ash	o	o	o	x	xxx
5. Neutral soap — potassium salt	o	o	o	x	xx
6. 75% (5) and 25% Sodium Tripolyphosphate	o	o	o	x	xx
7. 75% (5) and 25% Soda Ash	o	x	x	xxx	xxx
8. 75% (5) and 25% Versene	o	o	o	xxx	xxx
9. Nonionic: alkyl phenol — ethylene oxide	o	o	o	o	o
10. 75% (9) and 25% sodium tripolyphosphate	o	x	x	x	x
11. 75% (9) and 25% soda ash	x	x	x	xxx	xxx
12. 75% (9) and 25% Trisodium Phosphate	x	x	x	xxx	xxx

T.G.A. Meets, Elects Factor

A DEBATE on the Robinson-Patman Act, the election of officers for the coming year, a question and answer discussion of cosmetic and toiletries merchandising and other problems and a full day meeting of the Scientific Section were among the highlights of the 17th annual convention of the Toilet Goods Assn., held May 12-14, at the Waldorf-Astoria Hotel, New York.

Packaging awards presented to perpetuate the memory of the late Charles S. Welch, first executive secretary of the T.G.A., went to Parfums Ciro, Inc., New York, for its "Ciro Quintet" and "Ciro Sampler" perfume packages in the over one dollar category. The "Suave for Men" hair preparation of Helene Curtis Industries, Inc., Chicago, received the award for the best package in the under one dollar retail classification.

The use of surface active agents in cosmetics was discussed in several papers presented during the meeting of the T.G.A.'s Scientific Section, held the final day of the meeting. In addition there was a paper on the analysis of ammoniated dentifrices by F. W. Schrieber and H. Breuer of the Pepsodent Division of Lever Brothers Co., New York, presented at the Scientific Section meeting. Following luncheon on May 14, the Cecil Smith Memorial Golf Trophy was awarded to Peter L. Forsman of C. H. Forsman Co., New York. Mr. Smith was the president of Yardley of London, Inc., New York. His son, Philip, currently head of the organization, was at the head table during the luncheon and subsequent presentation, when he was introduced. A letter from Mrs. Smith, Cecil Smith's widow was read.

Officer Elected

OFFICERS elected at the meeting include Davis Factor of Max Factor & Co., Hollywood, Calif., who was chosen president to succeed Joseph Keho of Dorothy Gray, Ltd., New York; vice-presidents, Jean Despres of Coty, Inc.; J. A. Ewald of Avon Products, Inc.; Charles T. Lipscomb, Jr., Pepsodent Division, Lever Brothers Co., all of New York; J. H. Lehman of Wildroot Co., Buffalo, N. Y.; secretary, W. F. Denney, Jr., of Frances Denney, Philadelphia, and treasurer, Philip C. Smith of Yardley of London, Inc., New York.

Directors elected for three years include Robert B. Brown of Bristol-Myers Products Co.; C. W. Godefroy, Godefroy Mfg. Co.; Harry Haus, George W. Luft Co.; Lessing L. Kole of Kolmar Laboratories, Inc.; John Hudson Moore, John Hudson Moore, Inc., and Martin Revson, Revlon Products Corp. J. G. Bell of Bonne Bell, Inc., was elected a director to fill the vacancy left by the election of C. T. Lipscombe, Jr., as vice-president. Peter L. Forsman and M. Lemmermeyer of Aromatic Products, Inc., were elected directors representing associate members for one year terms.

Opening the first session of the three day meeting, Joseph Keho, TGA president, pointed out that in spite of all the difficulties the industry had encountered in the previous year, toilet goods' volume was 8¾ per cent higher than in 1950. Expenses, and particularly taxes ate into profits, however, Mr. Keho stated.

Stephen L. Mayham, executive vice-president of TGA, began his report, at the same session, by stating "I do not recall a time in the history of our industry when both manufacturers and distributors were faced with so many difficult and pressing problems."

Difficulties facing the industry as enumerated by Mr. Mayham, include the passing of fair trade as a result of the Supreme Court decision in the Schwegmann case and the rulings of numerous state courts since the Supreme Court passed on the nonsigner clause in interstate commerce; the threat of more vigorous enforcement of the Robinson-Patman Act as a result of the issuance by the Federal Trade Commission of trade practice rules for the cosmetic industry, and the Delaney committee investigation of the use of chemicals in cosmetics. Also cited were controls on prices, salaries and wages, which Mr. Mayham said he thought would almost certainly continue. The raw material situation is good at the moment but can change, Mr. Mayham declared.

Assailing Congressional investigating committees for presenting reports based on one-sided testimony from government bureau representatives, Mr. Mayham singled out the Delaney committee and its counsel of bias in developing testimony. This was one of the reasons why the T.G.A. did not request an appearance before the Delaney Committee, Mr. Mayham said. "The Food and Drug Administration appeared as a special pleader for an unnecessary law and presented only one side of the case, and that in a very biased fashion," T.G.A.'s executive secretary said.

"Future trends in the industry with especial reference to the problems of the industry as effected by the various government agencies in Washington" were outlined by Hugo Mock, the general counsel of T.G.A. in his report which was read by H. Gregory Thomas, vice-president of Chanel, Inc., New York. "The manufacture and distribution of toilet preparations is at the present time complicated by questions of taxes, of trade restrictions, of Food and Drug supervision and not least with railroad and other transportation costs," Mr. Mock said. How best the manufacturer can, in his opinion, deal with these problems was outlined as follows by Mr. Mock:

"1.) Watch . . . transportation charges and see that allowances under the Robinson-Patman Act are properly allocated in analysis of selling and delivery expenses.

"2.) The campaign against excise taxes should be unremitting even

if the present time is not propitious for their removal.

"3.) Work with personnel of the Federal Trade Commission and announce . . . plans for . . . adherence to the cosmetic code as soon as possible.

"4. Trust the Food and Drug Administration which will meet (manufacturers) more than half way in (their) problems."

The role of the chemist in the cosmetic industry was discussed by H. D. Goulden, scientific director of T.G.A., in the final address of the first morning's session. Directing his remarks to management rather than to technical personnel, Mr. Goulden pointed out that if top executives of cosmetic firms are to keep their companies in the foreground of an advancing industry they must be certain that their scientific staff is being fully and efficiently utilized. The functions of the research staff were outlined by Mr. Goulden who described research as a "tool, and like a tool it should be used when there is need for it, according to a well-thought-out plan and with as little expenditure of money as is possible."

Questions and Answers

A QUESTION and answer session, presided over by T.G.A. executive vice-president, S. L. Mayham, occupied the first afternoon of the meeting. Discussed were problems pertaining to distribution and merchandising of cosmetics and toiletries. Questions prepared in advance were answered by industry representatives chosen at random. Among those questions discussed were:

"Are channels of distribution changing?"

Ans. Substantial inroads into sales of toilet goods by department and drug stores are being made by the supermarket, because women spend more time in grocery stores.

Another comment was that drug and department stores are still the best outlets because of their specialized knowledge of cosmetic products.

The question of whether house to house selling is superimposed on or cutting into drug and department store sales was answered in this way. House to house selling is the oldest form of selling and is getting stronger. One of its strengths lies in the fact that people in many parts of the U. S. do not have the opportunity to use the normal channels of distribution. On the question of the size of the average house-to-house type of sale of cosmetics, it was brought out it is not four to five times that of store sales as is sometimes indicated.

What has caused the increased interest of the government in our industry?"

One comment was to the effect that the Food and Drug Administration is interested in the drug and cosmetic industry because it is big.

Another answer was that the government's interest arises from natural causes. The number of chemical products has skyrocketed in the past 20 years. Naturally, the Food and Drug Administration wants to protect consumers and must be convinced that industry is safeguarding consumers.

A third explanation was that the government is interested in everybody's business for more reasons than one, including power, money, etc.

A further comment was that the government interest in the drug and cosmetic industry is unique. It is one of the very few industries attacked by the Robinson-Patman Act, which is one of the most widely violated acts on the statute books. The Government is only attacking the crumbs when singling out the drug and cosmetic industry. The Act is so badly written or so poorly enforced that it should be wiped off the books or enforced.

"What sales promotion methods are increasing or decreasing in value?"

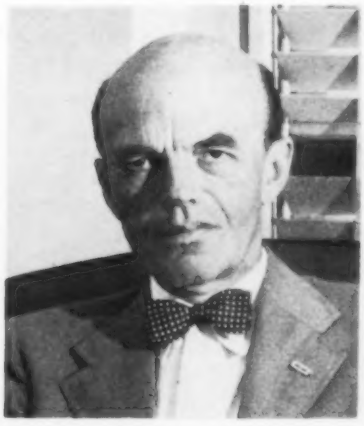
The fragrance fountain was singled out as being less useful today than formerly. At first it was thought to be a good idea. Samples are not as good as they used to be. There is an element of cheapness in giving away perfume. Cooperative advertising also was mentioned as being less effective than it once was, and too many advertisements are being used by retailers which do not bring results. Value of toilet goods advertising in stores is of decreasing value, whereas mail inserts are of more value than they once were. There is also an improvement in national advertising. More manufacturers should look into why their products are used and how.

A participant who had just

DAVIS FACTOR



S. L. MAYHAM



C. T. LIPSCOMB, JR.



completed a 9,000 mile trip reported a certain smugness in promotions. He stated that every promotion will have to be studied and improved upon if the industry is to have better third and fourth quarters. Competition is becoming sharper.

In defense of cooperative advertising one speaker said when you have a theme and are consistent in using it you will sell merchandise.

What's wrong with the industry's advertising?"

To answer this question another question was asked: "What's wrong with the product?" You must have a product, you must decide on a retail price and what method of distribution you are going to use. Based on the answers to those questions you plan your advertising and promotion. You can advertise nationally in newspapers or magazines exclusively. Sometimes you can sample, sometimes do cooperative advertising. You must have a product that will stand on its own feet and promote it accordingly.

"Are gift days growing or lessening in importance?"

Business for Easter does not mean much; on Mother's Day there is very little; St. Valentine's Day produces a ripple, but Christmas is good.

Holidays as gift giving days have lost significance according to a survey based on a University of California at Los Angeles discussion. Territorially it was found that gift giving days are growing in importance in the south and southeast. In both instances St. Valentine's Day lost its importance for the industry in competing with candy and flowers. In the southwest, Mother's Day and Christmas are still as good as in previous years. Gift days, with the exception of Christmas, are not as good in the midwest as they once were. Christmas is growing in importance in the far west, but St. Valentine's Day is decreasing.

"Why continue to fight excise taxes?"

There is still a possibility of getting the excise tax lifted. The professional products of the beauty shops have been freed from excise taxes.

"Exorcise the excise tax" one speaker said. It is only through the votes of women that these taxes can be removed.

"Would joint sales promotion be desirable in the industry?"

Although no such program has been attempted through the Toilet Goods Assn. because of the variety of products, such a program is possible for groups of products such as men's lines, make-up lines, etc. Although a joint promotion could be handled, it would not be easy, and would involve changing the T.G.A.

Another comment was that it was thought the T.G.A. could sponsor a clinic that travelled throughout the U. S. The principal disadvantage to such a joint promotion is that some manufacturers are not members of the T.G.A. and they would benefit from the program at the expense of members. The campaigns of the tea association and the railroad association were cited as examples of what might be accomplished.

An investigation of such a promotion was suggested and voted by those at the session. It was the opinion of the person making the suggestion of investigating the program that it will be found that the cost factor will be too large for the promotion to be effective.

A good public relations program aimed at women's clubs, college groups, pre-cosmetic users, etc., was suggested as an alternative.

"Why do women buy your products?"

The question was answered as though it had been put in the negative. One suggestion was that toilet goods manufacturers take stock of themselves. Along the same line it was brought out that perhaps manufacturers have forgotten the fundamentals. Possibly women don't know about the Robinson-Patman Act. With a larger audience of women who are eager to buy, it was suggested that the fundamentals of selling be reviewed; that manufacturers turn to research for their finest products and then turn to advertising, of which there is never enough. The importance of giving consumer true facts about products and the value of using demonstrators were also stressed.

"How near is the cosmetic industry to the saturation point in sales?"

There is no such point on any product, according to one comment. The greatest problem is to get the consumer to use products.

Another comment was that the industry has not reached the saturation point yet, and that manufacturers should keep everlastingly at their sales efforts and the saturation point won't be reached for many years.

"What about the long range price trend?"

The answer to this question depends on the value of the dollar. This in turn is very much tied up with the economics of the future: are we going to have higher taxes? more inflation? more pressure on the upper income group? There will always be a class capable of buying the more exclusive items.

Another comment was that removal of the excise tax would permit manufacturers to reduce prices around 16 per cent. "Aim to create a desire in the class able to buy your products," was another suggestion. Manufacturers can't look forward to material reductions in their costs of distribution, although practically every large firm in the industry has reduced the price of its merchandise.

Robinson-Patman Debate

FOLLOWING a paper, "Cosmetics —Symbol and Resultant of the Emancipation of Woman," by Edward Sagarin, Sagarin Institute of Olfactory Research, Inc., New York, a debate on the merits of the Robinson-Patman Act was the other highlight of the morning session, May 13. Taking the affirmative side of the question: "Resolved, That the Theory and Philosophy Underlying the Robinson-Patman Act are in the Best Interests of Industry, Trade and the Public," was Everette MacIntyre. He is Chief, Division of Investigation and Litigation, Bureau of Antimonopoly, Federal Trade Commission, Washing-

ton, D. C. The negative side was presented by J. Howard Carter of Townley, Updike and Carter, New York law firm.

Mr. MacIntyre emphasized that the trade allowance features of the act had "revived and restated the common-law principle that a seller who enters a common calling or business, and who holds himself out to serve the public generally, must serve all comers at a reasonable price and without discrimination."

Mr. Carter said the Act was so broad—despite what the courts had said about it—it is so full of patent ambiguities and generalities that in discussing it it is difficult to know where to start and where to stop. Business and the consuming public has gotten along pretty well for the period between 1914 and 1936 and had managed to survive under the Clayton Act. But in 1936 in the U. S. we were embarking on a new era, a new philosophy, a state based on a planned economy, he said.

Scientic Section

EIGHT papers were presented during the all-day metting of the Scientific Section, May 14. Among those discussed were three dealing with the effect of surface active agents in toiletries preparations, two dealing with the effect of these agents on the eye. Another dealt with eye irritation studies of shampoos, and an analysis of ammoniated dentifrices was the subject of still another.

Author's abstracts of the papers follow:

"Toxicity to Eye Mucosa of Certain Cosmetic Preparations Containing Surface Active Agents," by J. H. Draize and Elsie A. Kelley, Division of Pharmacology, Food and Drug Administration Federal Security Agency, Washington, D. C. Synthetic surface-active agents used in drugs and cosmetic preparations have led to incidents of injury. Most synthetic surface-active agents are not exact chemical entities but are condensation products characterized by general empirical formulae. Such agents are designated as anionic, cationic and non-ionic depending on chemical structure, all three types of surface-active agents are used for topical drug and cosmetic use. Their extensive use in shampoo, bath and hair-waving preparations leads to occasional accidental introduction of these agents into the eyes which may produce corneal opacity, iritis, pannus, chemosis, severe congestion and erythema of the palpebral and bulbar mucosa with discharge.

Fourteen surface-active agents (4 anionic, 4 cationic, 6 non-ionic) were examined for potential eye mucosa irritation by the method of Draize, Woodard and Calvery (*J. Pharm. & Exper. Therap.* 82, 377 1944). Variations in toxicity were noted among the three broad groups of surface-active agents, and among members of the same general groups. In general the toxicity of the groups was in the following decreasing order: Cationic > anionic > non-ionic. The inclusion of several surface active agents in a formulation, especially if these represent members with different ion activity, may produce a preparation of greater or lesser toxic properties than would be anticipated from the simple addition of toxic effects of the component surface-active agents.

"The Analysis of Ammoniated Dentifrices," by H. Breuer and F. W. Schreiber, Pepsodent Division, Lever Brothers Co., New York. A method is presented for the analysis of ammoniated dentifrices, whereby an aqueous extract is passed through a column of a sufonic acid-type ion exchange resin. After conversion to ammonia by the conventional urease method, the urea is titrated with standard acid. The ammonium ions are eluted from the resin with barium and calcium ions and determined in the eluate by addition of formaldehyde, followed by titration with standard alkali. Over two years experience with the method has shown it to be well suited for use under routine control conditions.

"The Physiologic Effect of Certain Surface Active Agents on the Rabbit Eye," by L. W. Hazleton, Ph.D., Hazleton Laboratories, Falls Church, Va. A selected group of cationic, anionic, and non-ionic surface active agents was investigated for eye irritation potential, and this in turn correlated with physical, chemical and biochemical properties.

Within the scope of the studies no correlation could be established between eye irritation and either pH or surface activity. In general, wetting power does not correlate but has some relation within subgroups. Foaming property exhibits some relationship but not direct correlation. Protein precipitation coincides with severe irritation but is not indicative of gradation. In preliminary studies direct erythrocyte toxicity shows some gradation of reaction but the data are incomplete.

Some Eye Irritation Studies of Shampoos and Other Hair Preparations, by Russell A. Cain, consultant, and William R. Markland, chief chemist, John H. Breck, Inc., Springfield, Mass. Rabbit eye irritation studies were conducted on a group of 11 commercial shampoos according to the method of Draize, Woodard and Calvery. Results were compared in respect to severity of eye irritation and corneal damage with the results obtained on a group of control materials including a 10 g/100 ml. aqueous soda or bar soap solution, a 40 per cent liquid potash soap shampoo and a dandruff treatment shampoo claimed to cause permanent corneal damage and removed from the market as a result of federal action.

The shampoo tested cause somewhat more eye irritation than the 10 per cent (wt/vol.) soda soap solution. It is emphasized, however, that the test shampoos, with a mean anhydrous content of 33 per cent, were considerably more concentrated than this soda soap solution. Generally speaking, the shampoos tested were no more severe in action than the 40 per cent liquid potash soap shampoo, a preparation with a long safe-use history. In no case was reaction as severe as that shown by the third control.

None of the test shampoos caused permanent corneal opacity although a few cases of temporary opacity were encountered. Recovery in some cases extended beyond the fourth day which has been considered by

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Vocabulary of Soap Boiling

THE following list of terms is not inclusive because each factory has, to some extent, its own terminology. For the same reason some terms may be defined differently by other people. But the compiler has tried to give what are the generally accepted meanings for words in common use in every soap factory.

ALKALI—Soap boilers speak of two kinds—free alkali and total alkali. Free alkali is the available sodium hydroxide in a soap or lye. Total alkali is the sodium hydroxide plus sodium carbonate. Sodium carbonate cannot saponify neutral oil or fat, though it can saponify fatty acids.

BALANCE NIGRE—After the finished soap has been pumped out of a kettle, what remains is the balance nigre.

BOILDOWN—Boiling soap with a brine solution, stronger than usual, to remove alkali and glycerine from the soap and increase the electrolyte content while holding the water content to the minimum consistent with a good result. A secondary object may be to remove puffiness from the soap.

BRINE WASH—Any of the usual operations intended to remove glycerine and alkali from the soap by boiling and graining with a lye containing sodium chloride.

CAUSTIC—An abbreviation for caustic soda, or sodium hydroxide solution.

CHANGE—Each step in soap boiling procedure is termed a change, e.g., killing change, strong change, finish.

CLOSED CONDITION—When the content of the kettle is homogeneous and in such a state that when examined by the trowel test it flows in a smooth thin sheet leaving a dry surface.

COMPLETENESS OF HYDROLYSIS—The degree to which a charge of oil has been converted into fatty acid and glycerin in the hydrolyzer of a continuous soapmaking process.

ELECTROLYTE — Used to include all the inorganic salts of sodium present in the soap boiling operation, namely, the chloride, carbonate, hydroxide, sulphate.

FINISH—The final operation in soap boiling during which the contents of the kettle settle into two layers —neat soap and nigre. The quality of the soap at this stage is described by one of the following adjectives:

Open or Coarse

The water content of the soap is low and the electrolyte high.

The curd particles are quite distinct and the general appearance is rough.

Smooth or Closed

The water content is high and the electrolyte low.

The mass of soap seems smooth and homogeneous.

Sloppy

Too much water is present in the soap layer.

Heavy

Water content and electrolyte are both low.

FITTING—Instead of proceeding immediately from the Strong Change to the Finish, one or more extra changes may be inserted, in which the soap is brought to a closed condition and a nigre is taken off. This is known as fitting and only water and steam are used.

FLASHED FATTY ACID — Fatty acid, purified by flash distillation to be used in continuous soapmaking process.

FOOTS—The layer of soap obtained in the alkali refining of oil or fat and disposed of to a stocking charge comprising darker colored oils.

FREE ALKALI—Alkali in the form of sodium hydroxide.

GRAIN—The addition of electrolyte, usually salt, in sufficient quantity to make the soap separate from the lye. Also used to describe soap when it is in this condition but is then qualified by one of the following adjectives:

Hard or Short

The electrolyte content is high. The curds are distinctly visible in the boiling mass.

Soft or Long

The electrolyte content is low. The curds are not so well formed nor so distinct.

GUMMY — Soap which contains too much water and not enough electrolyte.

HALF-SPENT LYE—Strong lye.

HYDROLYZER—That part of a continuous soap making plant in which the fat is converted under pressure and at high temperature into fatty acid and sweetwater.

JELLING POINT—The density at which a saponification lye would form a gel on cooling and which indicates an insufficiency of salt.

KILLING—Saponification, that is, the conversion of fats to soap by boiling with caustic alkali.

KILLING SEAT—The lye from a killing charge.

LYE — An alkaline solution drawn from a kettle of settled soap.

LYE SEAT—Lye settled out from soap in the grained condition.

MIDDLE SOAP—Soap which contains more water than neat soap.

NEAT SOAP—The clear soap layer obtained after finishing a charge. It contains 61-63% T.F.A.

NEUTRALIZER—That part of a continuous soap making plant in which the fatty acids are combined with alkali to give soap.

NEUTRAL FAT—A mixture of the glycerides of fatty acids without any free fatty acids or unsaponifiable matter.

NIGRE—The dirty soap solution which lies under the layer of neat soap in a finished kettle. It is high in both electrolyte and water content but its composition varies throughout its depth being rich in soap at the top and poor at the bottom.

NIGRE GRAIN OUT—Removing dirt from a nigre by adding water, boiling, graining and settling to let the dirt fall to the bottom of the lye where it is run to sewer.

NIGRE LYE—The lye separating from a nigre grain out.

By Dr. James L. Boyle

NIGRE MUD—The mud from a nigre grain out.

NIGRE NIGRE—A nigre which settles out when nigre soap is fitted.

NIGRE SOAP—Soap from a fitted nigre.

PICKLE WASH—A wash with a solution high in electrolyte, inserted between the strong change and the fitting.

PITCHING—Another name for fitting.

PITCH WATER—Sometimes lye separates out below the nigre after soap has been pitched. Such lye is called pitch water.

PUFFY — Adjective applied to soap which has become aerated. Soap may also be puffed with steam but this puffiness disappears on cooling.

REAL SOAP—This term is usually associated with a percentage figure and it expresses the amount of sodium salts of fatty acids present in a sample.

REDUCING CHANGE—The use of lyes high in caustic to saponify the free fatty acids in a stocking charge and to reduce the alkalinity of the lyes before sending them for glycerin recovery.

ROSIN SAPONIFICATION—The conversion of rosin into rosin soap. Since rosin contains no glycerin, this is usually done in a separate operation to avoid diluting the glycerin-containing lyes.

SAL SODA—The concentrated solution of sodium carbonate used for saponifying fatty acids.

SALTING OUT—Causing soap to separate from lye by the addition of salt. Equivalent to graining.

SAPONIFICATION—The conversion of fats to soap by boiling with sodium hydroxide. In particular, it is used to name the main change of the soap boiling operation.

SEAT—Spent lye settled from soap in a kettle.

SPLITTING—The hydrolysis of fats to give fatty acids and glycerin.

STOCKING CHARGE—The mixture of oils and fats which comprise the raw material for the soapmaking operation.

STRONG CHARGE—The stage at which strong sodium hydroxide solution is introduced into the system, and prolonged boiling is carried out, in order to insure its complete reaction with the fats.

STRONG LYE—The lye which separates out from a strong change. It is high in caustic and low in glycerin and is therefore used to wash other charges.

SWEETWATER — The dilute glycerin solution which is obtained from the hydrolyzer of a continuous soapmaking plant. It usually contains between 15 and 18 per cent glycerin.

TAILINGS—That portion of the blend of fatty acids from the hydrolyzer of a continuous soap making plant, which is left behind after distillation.

TANK BOTTOMS—That portion of a tank's contents which is held back because it is inferior quality—darker color or higher moisture content.

TRY WASH—An operation which is occasionally needed as a preliminary to fitting and which consists of smoothing the soap and drawing off a lye. This wash is introduced when the soap contains so much electrolyte that it cannot be fitted without adding an excessive amount of water.

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Protection of Trade Secrets

ANY soap manufacturer is free to use a competitor's process or formula that is not protected by either a patent or a copyright. He cannot however use a trade secret or a secret manufacturing process of another where he acquires his knowledge by piracy or the betrayal of a confidence. Like wild animals held in the captivity of a cage, trade secrets belong to their owner so long as they remain in his exclusive possession or control, and so long as they do so no one can legally take them from him by fraud or stealth.

"The first thing to be made sure of," said Justice Holmes of trade secrets, "is that he to whom the secret is entrusted shall not fraudulently abuse the trust reposed in him."

A Minneapolis manufacturer developed a secret formula for making a cleansing and scouring compound. The ingredients, their proportion and the method used in their combination he kept secret. For protection he relied on secrecy rather than place his invention under the protection of the patent laws.

Upon receiving an offer for the purchase of this formula he made an agreement under which he disclosed his secret and transferred the right to its use to its purchaser in return for a contract for his own employment.

Later the purchaser of this formula attempted to have the courts set aside the contract as invalid, on the ground that the formula was not a secret. This the Supreme Court of Minnesota refused to do and in its decision is outlined the fundamental principles of law protecting trade secrets of this character.

The value of the discovery is not destroyed, asserted that court, by the mere fact that the means by which the discoveries are made are obvious. Neither can such circumstances be relied upon by a competitor to excuse his pirating of such a trade secret when by unfair means or as the beneficiary of a broken faith he obtains the desired knowledge without himself paying the price in labor, money or machines expended by the discoverer.

"There is no statutory protection for one who makes an article by a secret process or private formula," concluded the court. "He may have a property right in it but he has no special property right similar to the right of the owner of a patent or copyright. His secret is valuable only because of its being the secret and then only so long as he keeps it secret. The general public is free to find it out by any fair and honest method. Nevertheless the owner may protect himself against a discovery of the secret by a breach of confidential relation."

Further, a Federal court has asserted that a process may be held a secret and be entitled to protection even though it may not be patentable. "Quite clearly," said that court, "discovery is something less than invention and the protection of the patent laws may be extended to cover the results of the efforts of an inventor and be withheld from those of a mere discoverer. Invention requires genius, imagination, inspiration. Discovery may be the result of industry, application or be perhaps mere luck. The discoverer however, aside from the protection afforded by a regularly issued patent, is entitled to the same protection as an inventor."

The right of the owner of a secret process to the protection of the courts is tantamount to the right of the owner of a wild animal, it continues only so long as the animal or the secret remains in his custody and control. The protection vanishes when the process or formula is no longer a secret and has become the general property of the public.

An action was one time brought by the manufacturer of "Coal Oil Johnny Soap," to prevent the production and marketing of the same product by a competitor. In denying relief to the soap manufacturer a New York court said the method of making this coal oil soap consists solely in the selection, combination and mixing of well known substances in certain proportions and under certain temperatures and in their agitation for a certain length of time by well known appliances and in the end allowing the product to cool slowly. Here, said the court in conclusion, was involved no secret process whatever and no ground for the interference by the court for the protection of a trade secret.

These betrayals of confidence in the disclosure of trade secrets occur most frequently in those instances when the perennial desire of employees for "more" goads them into selling to unscrupulous competitors information entrusted to them by employers. Of the disclosure by employees of secrets of this character of an employer, an English court said in a decision that has been accepted as the law governing such circumstances, "Perhaps the real solution is that the confidence postulates an implied contract; that where the court is satisfied of the existence of a confidential relation then it at once infers or implies the contract arising from that confidential relation."

In relation to the employee's disclosure of a trade secret in a betrayal of the confidence of the employer, the court continued, "Was it lawful for him to do that? Is not this an abuse of the confidence arising out of the mere fact of employment, the confidence being shortly this, that the servant shall not use, except for the purpose of service, the opportunities which that service gives him of gaining information."

A similar situation arose in the United States when after nine years an employee engaged in the manufacture of depilatories, became dissatisfied with his position, resigned and accepted employment with a competitor to whom he gave in detail the processes and methods of his former employer. The first employer sued for an injunction to restrain not only the manu-

facture but any further disclosures either by the employee or the subsequent employer of this secret process.

In this instance the New Jersey court said, "Employees of one having a trade secret, who are under an express contract or a contract implied from the confidential relation to their employer not to disclose that secret, will be enjoined from divulging the same to the injury of their employer, whether before or after he has left his employ, and other persons who induce the employee to disclose the secret, knowing of his contract not to disclose the same or knowing that his disclosure is in violation of the confidence reposed in him by his employer, will be enjoined from making any use of

By Albert Woodruff Gray

the information so obtained although they might have reached the same result independently by their own experiments and efforts." This the court supplemented with an outline of the consequences meted by the law to competitors employing unscrupulous methods of this sort.

"The competitor is a party to the fraudulent disclosure of the secret and the employer is entitled to an injunction restraining this competitor from making any use of the information thus obtained. The injunction should not be refused because the process was such that it would probably have been discovered by independent experiments in the manipulation of the ingredients of which the products of both parties were alike composed.

"This competitor by its own conduct has put itself in such a position that it may even lose the advantage of future independent experiments. It would be quite impossible, however, to decide how much of the improvement in the product of this competitor would be attributable to its own independent efforts and how much to the knowledge of the process fraudulently acquired by it."

The only method offered by the law to avoid the consequences of a betrayal of the confidence imposed in a trusted employee is an injunction, an order of the court prohibiting not only the employee but the competitor as well, from exploiting the knowledge the employee has acquired from his former employer.

The manager of a Missouri company engaged in the manufacture of sanitary supplies and disinfectant compounds had accumulated the formulas of his company over a period of twenty years. At the end of that time, with some of his associates, he established a competing company for the manufacture of a product by these same formulas. Prohibiting the further use of this information that had been surreptitiously acquired by this employee the court said, "Injunction is a proper remedy to enjoin those who, having as former trusted employees gained confidential information for their own private gain in competing with the employer's business or in behalf of a rival concern."

When, however, a trade secret is disclosed under a contract provision for secrecy by a party to the contract to whom the disclosure has been made, courts not only deny to the defrauding party any use of the information but for any advantages or profits that have been acquired, the party to such a betrayal is held to be a trustee for the benefit of the owner of the secret.

A few months ago an action came before an appellate court in California in which the details of an unpatented process for cleaning sewers had been disclosed in confidence to a member of the inventor's family. The one to whom the diclosure had been made had agreed on his part to contribute to a corporation for the manufacture and marketing of the product.

The recipient of the information, however, not only failed to carry out his part of the agreement but began production under this secret on his own account. In the action brought for the protection of this secret the court said that not only should the property right in this secret be protected from this exploitation but the wrong doer be held a trustee obligated to preserve for the owner of the trade secret all that had been entrusted to him.

"Having accepted the confidence reposed in him he became a constructive trustee and was under obligation to refrain from abusing such confidence by obtaining an advantage to himself at the expense of the other party to the contract. His violation of his agreement was a fraud and from it a trust arose in favor of the one by whom the confidence has been imposed."

A New York court said of contracts relating to secrets of trade, that in recent years there had been developed a considerable body of law looking toward the protection of the business world against unfair competition and that the courts would enjoin disclosures of this character.

"We therefore are of the opinion that independent of any express contract between the parties courts will restrain such acts. This arises out of a violation of duty having its origin in the relation of the employer and employee and an implied contract that an employee will not divulge confidential knowledge gained in the course of his employment or use such information to his employer's prejudice.

"Where there is a written agreement that a party will not after leaving his master's employ, engage in the same line or a similar line of business and will not furnish to others information of any kind or nature pertaining to his employer's business, that fact supplies an added ground for the interference of a court in enforcing the obligations of the agreement."

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Larx Co. v. Nicol, 28 N.W.2d, 705, Miss.

A. O. Smith Corp. v. Petroleum Iron Works, 73 Fed. 2d 538

Bell & Bogart Soap Co. v. Petrola Mfg. Co., 54 N.Y.S. 663, New York

Merryweather v. Moore, 2 Ch. Div. (1892) English

Stone v. Goss, 5 Atl. 736, New Jersey

Sketchley v. Lipkin, 222 Pac. 2d 927, Cal.

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Moonlight Mist
PARKER'S
kwik
TRADE-MARK
A POLISH FOR FURNITURE
AND WOODWORK
SHAKE BOTTLE WELL
MADE BY THE MAKERS OF
PARKER'S PERFECT POLISH
C. W. PARKER CO.
69¢
Hilo
DRY BATH
FOR DOGS
AND CATS
CLEANS WITHOUT WATER
KILLS FLEAS • REMOVES PET ODORS
MAKES COAT GLOSSY
Ingredients: 88.0% Technical Pyrethrins
Manufactured By THE HILO CO., NORWALK, CONN.
Ajax

WHAT'S NEW?



"Moonlight Mist" soap (upper left, facing page) is the newest addition to the line of that name made by The House of Gourielli, New York. The soap is hard milled, white, bow backed for easy handling. Three cakes are packed lengthwise in a narrow gift box to retail for $2.50.

"Kwik" (upper right, opposite page) is a new polish for furniture and woodwork being introduced by C. W. Parker Co., Des Moines, Ia. It is packaged in a 12-ounce amber bottle to retail for 69 cents. Bottles for the polish are made by Owens-Illinois Glass Co., and molded plastic closures are by Armstrong Cork Co., Lancaster, Pa. Kalamazoo Label Co., Kalamazoo, Mich., supplies the labels.

New "Hilo" dry bath for dogs and cats (lower left, facing page) is packaged in an aerosol container for Hilo Co., Norwalk, Conn. Bath comes out in the form of soft puffs of creamy lather, which is massaged into animal's coat and then wiped off with towel. In addition to cleaning action, product is insecticidal. It retails for $1.29 and is said to provide enough material for about five baths.

"Custom Cologne" soap (lower right, facing page) in pink, yellow green and orchid shades has been added to the Harriet Hubbard Ayer (Div. Lever Brothers Co., New York) line of that name. It is a superfatted soap, made from the same formula as Ayer's "Cream Soap." Three hand size bars to a box retail for $1. Fragrances include exotic, floral, tailored and woodsy scents.

Besides a new formula for "Chigarid" (below) for control of chiggers and treatment of chigger bites, the product is appearing in a new bottle, with new label and a newly designed counter display. C. & C. Laboratory, Dallas, is the maker of the product, which is packed in one-half ounce Amber Square applicator bottles, 12 to a display carton. Duraglas bottles are supplied by Owens-Illinois Glass Co., Toledo, O.; label design and display carton are by Central Carton Co., Cincinnati. Plastic closures are made by Armstrong Cork Co., Lancaster, Pa.

"Midnight" bubble bath in liquid form (right) is the newest addition to the line of toiletries and cosmetics being marketed by Tussy, Inc., New York.

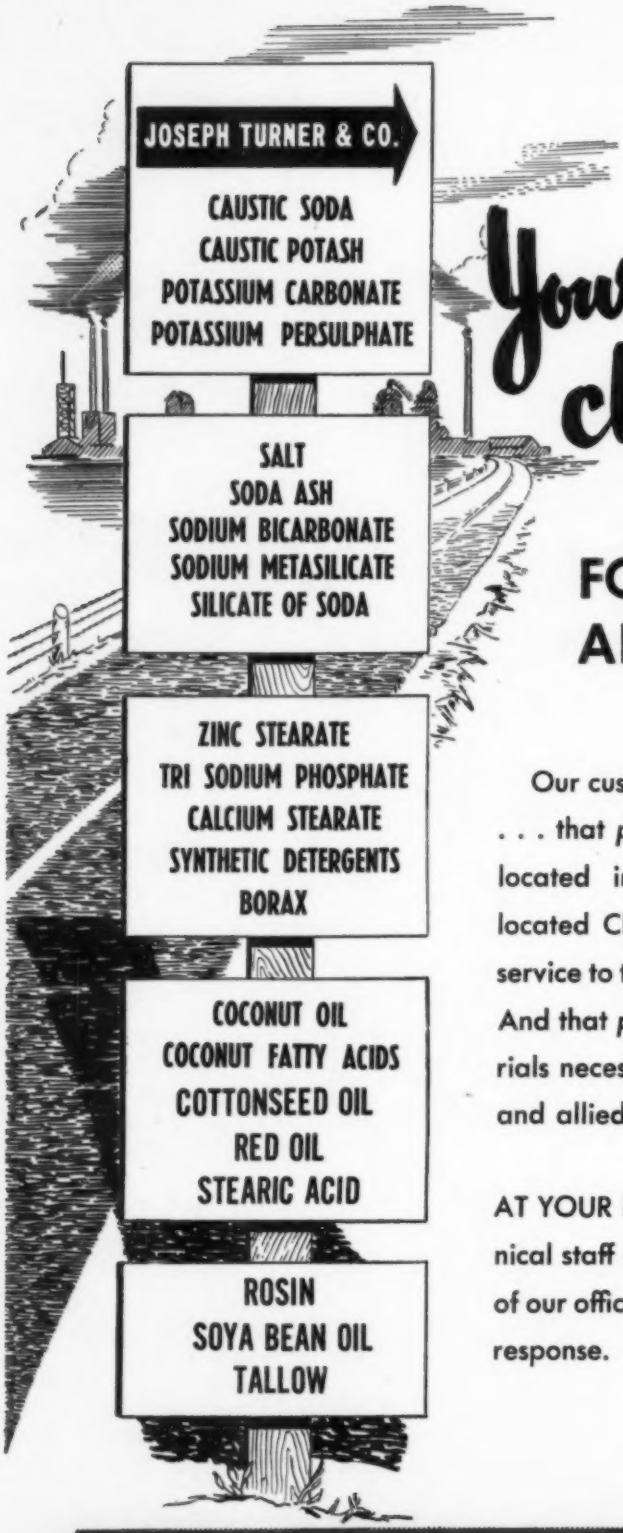
Uncle Sam Chemical Co., New York, recently introduced "Bikini Wax," a water emulsion type floor care product recommended for all types of flooring. Gallon size can, shown at right, has three color label.

New jet-action insecticide sprayer (lower right) the national distribution of which is now being handled by James Varley & Sons, Inc., St. Louis. The "Challenger" sprayer can be used for insecticides and glycol formulations in amounts ranging from a few ounces per hour to 4½ gallons p.h. Z & W Machine Products Co., Cleveland, is the manufacturer.









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News

Quinto with East Coast

Appointment of Dr. Pietro Quinto as chief chemist in charge of product development for East Coast



DR. PIETRO QUINTO

Soap Corp., Brooklyn, N. Y., was announced recently. Dr. Quinto was formerly connected with Conti Products Corp., Brooklyn, as production chemist for soaps, shampoos and allied products.

At the same time it was announced that Walter Tisch, East Coast's president, is leaving shortly for Europe to visit soap plants and survey conditions abroad.

New Lever Perfumer Buyer

Lever Brothers Co., New York, recently announced that Henry J. Meade has been advanced to the post of buyer of perfumery and flavoring materials. Mr. Meade joined the company in 1943 as a laboratory technician in the Harriet Hubbard Ayer cosmetic division. Since 1949 he has been head of quality control at Ayer's Long Island City plant.

Williams, Semler Merge

Acquisition of R. B. Semler, Inc., New Canaan, Conn., by J. B. Williams Co., Glastonbury, Conn., became effective May 2, subject to completion of certain legal requirements, it was announced recently. Under terms of the merger each share of Semler common is to be exchanged for $3 principal amount of new 5% debentures, due 1962 of Williams Co. and one-fifth of a share of Williams common stock. R. B. Semler owns the trademark "Kreml" under which it distributes tonic and shampoo manufactured for it by J. B. Williams.

New Harley Floor Cleaner

Harley Soap Co., Philadelphia, recently announced "L.F.D. 100," a solid synthetic nonalkaline floor maintenance cleaner. It may be diluted one to 250 parts of water for use on all types of floors. The jobber cuts one part of the concentrated material with nine parts of water. This dilution is called "L.F.D. 91" and may be sold under that name. The consumer further dilutes it with 20 to 32 parts of water according to type and intensity of soil, and applies it with spray or mop. According to the manufacturer no scrubbing is required under ordinary conditions.

Eugene Theimer Dies

The death was reported recently of Dr. Eugene Theimer, research chemist with the Standard Chemical Products Co., Hoboken, N. J. He was a native of Czechoslovakia, educated in Europe, and had formerly been a chemist for Colgate-Palmolive-Peet Co. and chief chemist for the Andrew Jergens Co., Cincinnati. Surviving are his wife, Mrs. Stephanie Feichtmann Theimer, and two sons, Ernst and Edgar Theimer.

AASGP to New Quarters

New and larger quarters in its present location will be occupied around July 1 by the Association of American Soap & Glycerine Producers, it was learned late last month. The new quarters are on the 20th floor of the building at 295 Madison Ave., New York, where the Soap Association presently makes its offices.

Mayberry Street Vice-Pres.

Appointment of Joe L. Mayberry as vice-president and treasurer of R. R. Street & Co., Chicago, was



J. L. MAYBERRY

announced recently by Paul V. Warren, the firm's president and chairman of the board.

Atlantic Appoints Execs.

Henderson Supplee, Jr. was elected president of the Atlantic Refining Co., Philadelphia, succeeding Robert H. Colley, at a recent meeting. Mr. Colley, who has been associated with Atlantic for 33 years, was elected chairman of the board. Mr. Supplee, now chief executive offier of Atlantic, was born in Philadelphia, educated at the Episcopal Academy, Princeton University, and the University of Pennsylvania School of Finance. He came to Atlantic in 1947 as vice-president and general manager of domestic sales. In 1948 he was elected to the board and in May 1949 he was named executive vice-president.

Election of W. F. Stroud as vice-president was announced recently. He was also appointed general manager of manufacturing for Atlantic. He succeeds E. J. Henry, who after 47 years of service with Atlantic has withdrawn from active functional management, but who remains as a director.

Mr. Stroud is in charge of all



JAMES A. REILLY



WILLIAM L. SIMS, II



J. A. STRAKA

manufacturing activities of the firm and responsible for the purchase of crude oil required by the refineries to supplement Atlantic's own production. Mr. Stroud started with Atlantic in 1916. He has held the positions of superintendent of the gas department and also of the lubricating department in the Philadelphia refinery. He became assistant plant manager of that refinery in 1925, and manager in 1945. He is a graduate of New York University.

Colgate Names Executives

At the April meeting of the board of directors of Colgate-Palmolive-Peet Co., Jersey City, James A. Reilly, William L. Sims II, and J. A. Straka were elected executive vice-presidents, and H. W. Reynolds was elected vice-president, it was announced recently by E. H. Little, president.

Mr. Reilly becomes executive vice-president of the soap department, Mr. Sims executive vice-president in charge of the foreign department; and Mr. Straka executive vice-president of the toilet articles department. Mr. Reynolds, who is general counsel for the company, is a new vice-president.

Mr. Reilly joined Colgate 26 years ago as a salesman, and was advanced progressively to supervisor, district manager for several territories, Chicago division manager, and soap sales manager, before being named vice-president.

Mr. Sims joined Palmolive Co. as a salesman in 1924. After serving as southern division drug supervisor he was sent to Italy in 1927 to organize the Italian market for Palmolive. Three years later Mr. Sims was named head of the company's 10 subsidiaries in Europe as continental European manager. After the outbreak of World War II he returned to this country and was appointed assistant to the president of Colgate-Palmolive-Peet Co. After wartime government service in Washington he returned as vice-president in charge of foreign operations. Mr. Sims is also a director of the firm.

Mr. Straka joined Colgate 28 years ago. He was assigned to the Colgate foreign department in 1931 and served as general manager in Poland. Upon his return to this country at the start of World War II he was named general manager of the Kirkman division. In 1943 he became assistant to the president and the following year he became vice-president. He also is a Colgate director.

H. W. REYNOLDS



Mr. Reynolds has been general counsel of Colgate since 1946. Prior to that he was assistant general counsel. He joined the firm's legal department in 1943.

New Gunk Patent Licenses

A. F. Curran, director of research and development, Curran Corp., Lawrence, Mass., owner of "Gunk" self-emulsifying and self-scouring solvents for degreasing and decarbonizing, recently announced appointment of Gunk Pacific Southern Co., Pasadena, Calif., as the exclusive patent licensee in southern California to manufacture and distribute "Gunk" solvents.

Gray Joins McInerny

Andrew J. Gray, former community relations manager for Lever Brothers Co., New York, has become a partner in the Washington public relations firm of T. A. McInerny, Inc., it was announced recently.

William J. Spence Dies

William J. Spence, 67, national sales manager until his retirement two years ago of Roger & Gallet, New York, died recently in Riverview Hospital, Red Bank, N. J. A native of Philadelphia, Mr. Spence joined Roger & Gallet forty-four years ago. Surviving are three sons, William, Justin, and Gerald Spence; two daughters, Mrs. Kenneth O'Connor and Mrs. Edward McKenna, and a sister, Mrs. James Devanney.

Carl Schaad Dies

Carl E. Schaad, president and founder of Chemical Manufacturing and Distributing Co., Easton, Pa., manufacturers of soap, soap powder and insecticides, died May 1 in the Hahnemann Hospital, Philadelphia, at the age of 52. He was president also of Paper Makers Chemical Co., Easton. He had been suffering from a heart condition, and had not been able to work in recent months. A son, Carl, Jr., is active in the company.

Stepan Completes Building

Stepan Chemical Co., Chicago recently announced completion of the first of a series of planned structures located at 3250 South Kedzie Avenue. The new building will house general and sales offices, a pilot plant section and research laboratories. The company's plant at 1353 No. North Branch Street will continue to be operated, and space added by the change will be devoted to expanded activity in the surface active agents field.

Louis Geismar is Dead

Louis Geismar of Elgo Trading Co., New York, died recently at the age of 68. Earlier in the year he had suffered a virus infection for which he was hospitalized. He returned to business about a month before his death. He is survived by his widow.

Monsanto Advances Hansen

Ralph F. Hansen was recently appointed manager of a newly-created marketing department of Monsanto Chemical Company's Plastics Division, Springfield, Mass. The new department is assisting the sales department in creating and maintaining closer relationships with producing and distributing industries and will provide marketing and merchandising assistance for product sales programs. Mr. Hansen, who joined Monsanto in 1945, has been assistant sales manager in charge of vinyl film sales.

Chemists' Club Elects

Officers for 1952-1953 elected at the recent annual meeting of the Chemists' Club, New York, include: William F. George, president; Ira Vandewater, resident vice-president; R. J. Quinn, non-resident vice-president; F. W. Sullivan, suburban vice-president; L. E. Erlandson, treasurer; Lloyd Van Doren, secretary.



WILLIAM F. GEORGE

The following were elected trustees for the three-year term 1952-1955: Thomas B. Drew, S. H. Farkas, Foster D. Snell, and Lincoln T. Work.

F.T.C. Bans Forhan Claims

The Federal Trade Commission recently reported that it has ordered the makers of Forhan's tooth paste to discontinue allegedly false advertising. FTC found that the product, made by Zonite Products Corp., New York, contains nothing which when applied is of therapeutic value in the prevention or cure of any disease or disorder of teeth or gums. According to the agency its sole value is as a cleaning agent. FTC directed Zonite to stop advertising that Forhan's is of any value in making gums firmer or in the prevention of gingivitis or pyorrhea by massage.

New Dairy Detergent

An improved acid-type detergent was announced recently by Diamond Alkali Co., Cleevland. "Diamond Powdered Acid Cleaner" is an inhibited acid providing a combination of inorganic salts and a wetting agent, which make it suitable for regular use in creameries, dairies, and other milk-handling plants for daily cleaning of milk plant equipment.

Henry Wolf Dies

Henry Wolf, a chemist employed by Colgate-Palmolive-Peet Co., Jersey City, N. J., until his retirement in 1947 died recently at his home, 177 Bergen Avenue, Jersey City. He is survived by his wife, Mrs. Martha Wolf, and a daughter, Mrs. Martha Carlock of Jersey City.

New Soda Ash Bulletin

Solvay Sales Division, Allied Chemical & Dye Corp., New York, recently announced a revised and enlarged edition of its technical and engineering bulletin No. 5, entitled "Soda Ash — Its Properties, Loading and Unloading, Handling and Storage". Copies of the 64-page booklet are available upon request.

T.G.A. Meets

(*From Page 49*)

some to be generally indicative of safety.

A group of miscellaneous hair preparations including a cold wave lotion, neutralizers, rinses, and scalp lotions, was also tested and showed a generally lower order of eye irritation than the shampoos and no corneal opacity.

"Some Limitations of Surface Active Materials in Cosmetic Practice," by I. R. Hollenberg, Van Dyk & Company, Inc., Belleville, N. J. The outstanding role that synthetic surface active materials have played in the formulation of present day toilet preparations was reviewed. It is pointed out, however, that the cosmetic chemist could do a much better job if he possessed a greater familiarity with all of the characteristics of these substances. Detailed examples were given of instances where a knowledge of the limitations, as well as of the advantages of the materials involved, would have enabled the formulator to develop a better product.

Physiological factors incidental to the use of surface active materials in cosmetics were touched upon with reference to the publicity attendant upon the Delaney committee hearings.



"I see a bright future
now that you've switched to
Givaudan fragrances for soaps."

For information about soap-selling fragrances, write to
Givaudan-Delawanna, Inc.
330 West 42nd Street New York 36, N. Y.

Capkovitz C-P-P Perfumer

Appointment of Stephen G. Capkovitz as head of the perfumery division of the research and development department of Colgate-Palmolive-Peet Co., Jersey City, N. J., was announced recently. Mr. Capkovitz formerly was chief chemist and perfumer for three subsidiaries of Vick Chemical Co., New York: Prince Matchabelli, Inc., Seaforth, Inc., and Sofskin Co. Prior to that he was chief chemist for Yardley of London, Inc., New York.



STEPHEN G. CAPKOVITZ

Resigns from Lueders

Resignation of Paul L. Cooley as manager of the Pacific Coast branch of George Lueders & Co., New York, was announced recently. Mr. Cooley has been with Lueders over twenty years.

Mr. Cooley is succceeded by William J. Feeley, who has been attached to the firm's New York headquarters for the past fourteen years.

New CMC Package

Crude CMC, CMC-CT, will be packaged in a new larger bag which will contain a guaranteed minimum of 50 pounds dry active sodium carboxymethylcellulose, according to a recent announcement by Hercules Powder Co., Wilmington, Del.

In addition to the new convenient weight basis, the active ingredient content of CMC-CT has been increased in order to facilitate handling and storage. The new material will have an assay of about 80 per cent CMC; therefore each bag will have a total dry solids weight of about 62½ pounds.

The increase in active CMC reduces residual salts which serve no useful functions in most applications for CMC.

Makes Vanillin from Lignin

Givaudan-Delawanna, Inc., New York recently announced that it will market in the immediate future vanillin U.S.P. from Lignin. It hopes to have ample supplies of the material by August. Givaudan has been making vanillin from eugenol since 1924 in its Delawanna plant.

Miranol Shampoo Improver

Commercial production of sodium salt of myristoyl quaternary hydroxy cycloimicinic acid sodium alcoholate (patent No. 2,528,378) was announced recently by Miranol Chemical Co., Irvington, N. J. This compound is designed for use with sulphonated fatty alcohols and other synthetic organic detergents in clear and creme shampoos.

It is claimed to impart lubricity or slip equal to that of soap shampoos, and is said to yield plentiful lather with small tight bubbles rather than with large loose bubbles. The new compound is sold under the trade name "Miranol MM" by H. M. Johnson, Inc., Elizabeth, N. J., general sales agents for "Miranol" surface active agents.

CSC Names Wood

Appointment of Richard C. Wood as assistant to Abbott K. Hamilton, vice-president in charge of products divisions was announced recently by Commercial Solvents Corp., New York. Dr. Wood has held executive and development positions in the chemical industry for the past sixteen years. His previous affiliations include General Aniline & Film Corp., New York, and Procter & Gamble Co., Cincinnati.

Commercial Solvents' New York headquarters are now in the new building at 260 Madison Ave., where the firm occupies the ninth and tenth floors. The new telephone number is LExington 2-6420.

Lever Names Lewis

Appointment of William J. Lewis as brand promotion manager for "Lux Flakes," "Lux Toilet Soap" and all-purpose "Breeze" detergent was announced recently by G. W. LaBorie, promotion manager of Lever Brothers Co., New York. A graduate of Fordham University and a former Air-Force captain, Mr. Lewis was formerly sales promotion manager of Paul Masson Wines and from 1947 to 1951 was assistant sales promotion manager of the Pepsi-Cola Company.



WILLIAM J. LEWIS

New Fairy Soap Package

For the first time since the war Fairy Soap is being packaged in cartons in England. The new package, issued by Thomas Hedley & Co., Ltd., contains two bars.

Hooker Starts Wash. Plant

The $2,000,000 anhydrous ammonia plant of Hooker Electrochemical Co., Niagara Falls, N. Y., started operating recently at Tacoma, Wash. Its entire production has been contracted for and plans are already under consideration to increase its capacity by 50 per cent. The output of the plant for the time being is shipped exclusively by tank car. Hydrogen required for the process is obtained from Hooker type "S" and "S-3" electrolytic cells which convert salt brine into caustic soda, chlorine, and hydrogen. Nitrogen is obtained from the air by means of liquifying equipment supplied by L'Aire Liquide, Montreal, Canada. Design and erection of the anhydrous ammonia plant were supervised by the Chemical Construction Corp.



So little does so much . . .

RENEX® is the best

foundation for better detergents

You can produce cleaning compounds tailor-made to *your* market.

For example—RENEX compounded with mild alkalies makes excellent wall and floor cleaners that do a fast, efficient job of removing grease spots, general soil and discoloring films. Here's a formula meant to serve only as a guide and to show one of the uses of RENEX:

RENEX	10%
Tetrasodium pyrophosphate	30%
Soda ash	30%
Sodium bicarbonate	30%

There's nothing like RENEX for increasing the efficiency of alkalies, sulfonates, or soaps. As little as 5% RENEX has increased cleaning efficiency as much as 30%! RENEX is the best foundation for better detergents for floor and wall cleaners, dishwashers, home laundries —for the hundred and one household, industrial, and military cleaning jobs.

RENEX is low in cost and made from plentiful raw materials. It is also available in powdered form—RENEX 25. Samples and helpful literature are available for your study. Send *now* for RENEX booklet of formulas for typical detergent preparations.

Industrial Chemicals Department

ATLAS POWDER COMPANY

WILMINGTON 99, DELAWARE • OFFICES IN PRINCIPAL CITIES

ATLAS POWDER COMPANY, CANADA, LTD., BRANTFORD, CANADA

H. V. Raymond Dies

Herbert Victor Raymond, of Toronto, Ont., Canada, industrial sales manager of Colgate-Palmolive-Peet, Ltd., died recently in Quebec City. A native of Port Maitland, N. S., he joined Palmolive-Peet as a salesman after having been in business for himself for some years. Mr. Raymond was appointed to the position he held at his death shortly after joining the firm.

AIC Award F. D. Snell

The fourth annual honor scroll award of the New York chapter of the American Institute of Chemists is being presented this year to Dr. Foster D. Snell, president, Foster D. Snell, Inc., New York, consulting chemists. The announcement was made recently by Dr. Henry B. Hass, chairman of the New York chapter.

The honor scroll, given annually for outstanding contributions to the profession of chemistry, was presented to Dr. Snell at a dinner meeting in the Hotel Commodore, New York, May 22.

NEMA Honors Johnson

National Electrical Manufacturers' Association recently awarded its fifty-year certificate in recognition of a half century of continuous and outstanding service in the electrical industry to Carl E. Johnson, chairman of the board of Sterling Electric Motors, Inc., Los Angeles. Mr. Johnson started his career in Chicago, founded an electric motor manufacturing plant on the west coast in 1906, and has since then been concerned with development and manufacture of induction motors, geared motors, and variable speed transmissions.

New Pakistan Oil Plant

A new vegetable oil factory valued at £1,500,000 was opened recently at Rahimyar Khan in Bahawalpul state, Pakistan. It is being built with the aid of capital and technicians from the British firm Unilever, Ltd. The factory, known as Sadiq Vegetable Oils and Allied Industries, Ltd., will turn out soap, glycerine, edible oils and cattle fodder from seed.

Givaudan Sales Meeting

The entire sales staff of Givaudan-Delawanna, Inc., New York, met with personnel of the firm's other divisions, research, perfumery, cosmetic, and other departments for the annual three day sales meeting held at the Hotel Berkely-Carteret, Asbury Park, N. J., recently. The convention was opened by Ernest R. Durrer, executive vice-president, and presided over by J. H. R. Stephenson, sales manager. Other officers and directors of Givaudan-Delawanna, Inc., and its associate companies, Sindar Corp. and Givaudan Flavors, Inc., also attended the gathering. Plans were discussed during the meeting for the broadening and expansion of specialized services by the company for its customers.

The meeting concluded with a banquet, at which Dr. Eric C. Kunz, president, gave an address and presented a gold watch to Dudley Lum, Chicago manager, commemorating Mr. Lum's twenty-five years with Givaudan.

Photograph below was taken during recent Givaudan-Delawanna sales meeting.

Soap Making in Morocco

Fourteen plants constitute the Moroccan soap industry, according to an article in the March, 1952, issue of *Oleagineux*. Soap plants are located in Casablanca, Fedala, Meknes, Fes, Marrakech, and Mogador. Their annual production amounts to about 30,000 tons of household soap. The industry obtains its liquid oils mostly from domestic sources. It has at its disposal the soap stock resulting from oil refining operations, and besides, Morocco is a comparatively important producer of commercial olive oil. Solid oils come from abroad through imports of copra, palm, etc., either in the form of seed or oil. The territory produces some toilet soap and soap flakes. There is some factory production of soft soap, but most of it is made by artisans for the consumption of Moroccan customers.

Supreme Chemical Moves

Removal to new and larger quarters was announced recently by Supreme Chemical Co., Chicago. The firm's new address is 1739 North Milwaukee Ave.

Toni Expands Laboratories

Research facilities of the Toni Co., Chicago, will be expanded 50 per cent when the firm moves into its new laboratories in the merchandise mart on June 1, it was announced recently. The laboratories will occupy 8,000 square feet of space, and will be air-conditioned. Toni's research budget for 1952 is to be substantially above the previous annual budget of $500,000.



schimmel

We consider ourselves specialists in

IMITATION BERGAMOT OILS

for all types of perfumes
for all types of products

Now that Bergamot natural is out of reach for so many products, try our

OIL BERGAMOT
Imitation—Not NF

A first class replacement of the natural. Completely stable and without any foreign perfume notes.

OIL BERGAMOT
Imitation 3554

A very effective imitation with an ester content and general characteristics close to the natural.

Excellent in soaps

These are just two of our very successful bergamots. Write us your needs and we will recommend the best for your purposes.

SCHIMMEL & CO., INC.
601 West 26th Street, New York 1, N. Y.

Schimmel for Synthetics

ADM Stock to Employees

At a recent special stockholders' meeting of Archer-Daniels-Midland Co., Minneapolis, a stock purchase plan for key employees was voted. The purpose of the program, according to T. L. Daniels, president, is to provide an incentive for administrative and executive employees to become ADM stockholders. Options will be offered fifty to one hundred employees.

Under the plan, stock will be offered to a selected group of employees at the approximate market price. While the options are in effect for ten years, they may be exercised only while the employee is a member of Archer-Daniels-Midland Co.

Oakite Names NE Broker

Oakite Products Co., New York, recently appointed Barrie G. Sullivan as its New England brokerage representative. Mr. Sullivan has been with Oakite for 13 years.

Emery Shifts Sales Staff

At the recent annual meeting of the chemical sales staff of Emery Industries, Inc., Cincinnati, held recently in Cincinnati, several changes in its sales staff were announced.

A. R. McDermott who comes from the Chicago district office assumes responsibility for all sales in Texas, Louisiana, Oklahoma, and Arkansas.

N. F. Reinert, formerly with development and service department, is assigned to the Chicago office, where he will work under D. R. Eagleson, who is in charge of that office.

F. L. Ekstrand, a new addition to Emery's sales staff, is assigned to the Philadelphia office and will cover eastern Pennsylvania, southern New Jersey, and parts of Philadelphia. Mr. Ekstrand had been associated with Borne Scrymser Co. in a sales capacity since 1939, when he was graduated from Lowell Institute of Textile Technology.

The sales meeting was highlighted by a panel discussion in which individual salesmen exchanged information, ideas and experiences. It was concluded with a golf tournament in which home-office executives competed unsuccessfully against sales personnel.

Poucher, Williams Honored

At a recent informal dinner held by the Society of Cosmetic Chemists of Great Britain at the Mirabelle Restaurant, London, W. A. Poucher of Yardley's and C. A. Williams, secretary of the Toilet Preparations Federation were guests of honor.

Present for recent Emery sales meeting were:

Seated: Left to right, H. D. Armitage, W. J. Siemens, J. P. Clancy, W. T. Meinert, R. T. Hull, A. R. McDermott, L. J. Hadobas, R. A. Behrmann, V. W. Colby. 2nd Row: R. F. Brown, K. K. Boyd, J. N. Washburn, Jr., J. P. Kramer, R. J. Roberts, D. R. Eagleson, F. L. Ekstrand, N. F. Reinert, N. J. York, R. M. Geis. 3rd Row: O. W. B'Hymer, N. A. Ruston, W. A. Colby, J. A. Funk, T. L. Reilling, L. F. Church, L. E. Francis, J. W. Ritz, A. C. Fusaro.

New "Foil" Cleaner

A folder announcing "Foil" new type cleaner was issued recently by Service Industries, Philadelphia. The company claims "Foil" to be highly concentrated, fireproof, odorless and economical in use. The folder supplies data on dilutions, packages and prices.

Honor Norda Advertising

For the second time in two years the industrial publication advertising of Norda Essential Oil and Chemical Co., New York, has won recognition for excellence, it was announced recently. Competing in the tenth annual competition of the Associated Business Publications, of which there were more than 500 entries, Norda's advertising won an award of merit in division 2 covering chemical, fabric, and food advertisers. Other winners in the division were E. I. du Pont de Nemours & Co., Wilmington, Del., Association of American Soap and Glycerine Producers, Inc., New York, and Koppers Co., Pittsburgh, Pa. As in 1950, when Norda won an award in the national industrial advertisers competition in San Francisco, the 1951 advertising was planned, created, and written by C. Ralph Bennett, vice-president and creative director of Fred Gardner Co., New York, the Norda agency. E. E. Benedict, Norda's advertising manager, accepted the award for the firm at a luncheon in Boston, April 8. Mr. Bennett received the award for the agency.



Dependable Source For Chemical Raw Materials



"Wyandotte Kreelon has good sudsing characteristics and solubility"

—says L. Carlton Mertz, Chicago, Illinois

"We've been in the cleaning compound business for more than 21 years," says Mr. Mertz, owner of L. Carlton Mertz Company, Chicago.

"Today, we make more than 100 products for dairy cleaning, metal fabricating and processing, and general maintenance work.

"To maintain our quality and keep pace with the industry, we make a constant check on all of our sources of supply.

"We find new, improved WYANDOTTE KREELON has good sudsing characteristics and rapid solubility—is very satisfactory for our purposes. We use it in a number of our quality detergents."

Have you tried our improved WYANDOTTE KREELON*? Its characteristics may be helpful to your products, speed your process, or cut your over-all cleaning costs. Send for a FREE sample, and a copy of our new 28-page book. It contains complete data. *Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in Principal Cities.*

*REG. U.S. PAT. OFF.

BULLETIN BOARD

Soda Ash:
To insure adequate supply for all our customers even in periods of short supply, we are expanding our soda ash production facilities. **Meanwhile, there's plenty to go around now.**

New Pluronic® F68:
First 100%-active flake nonionic ever commercially produced! Significant properties: ease of handling — superior detergency when properly built — stability with quaternary compounds — effectiveness as dispersant for hard-water soap curds.

Caustic:
Whether your soap process is continuous or batch kettle . . . whether you manufacture detergents or bleaches, Wyandotte has a grade of caustic that will satisfy your needs. Samples and information available upon request.

Wyandotte
CHEMICALS
FOR SOAPS AND DETERGENTS

Clarke Joins Lever

Appointment of Albert A. Clarke, Jr. as brand merchandising manager for Lever Brothers Co., New



ALBERT A. CLARKE

York, was announced recently. Prior to joining Lever Brothers, Mr. Clarke was a senior associate with McKinsey & Co., New York, management consultants. Formerly he was employed by U. S. Steel as a market analyst.

Join Helene Curtis

George D. Crittenton has been named merchandising manager of Helene Curtis Industries, Chicago, it was announced recently. Mr. Crittenton was formerly with Scholl Manufacturing Co. James Mahoney has joined Helene Curtis as sales supervisor. He was previously sales supervisor of the Chicago division of the Pepsodent division of Lever Brothers Co.

Mendoza Is Sales Manager

Appointment of Robert L. Mendoza as sales manager was announced recently by Antoine Chiris, New York. Mr. Mendoza's entire commercial career has been spent with Chiris, first in a technical and research capacity, and more recently in a sales capacity.

Bon Ami Names Broker

Bon Ami Co., New York, recently appointed J. J. Thompson Co., Detroit broker, as its representative for "Bon Ami Cleanser," "Bon Ami Cake," and "Bon Ami Glass Gloss." This is said to be the first time Bon Ami has used brokers in its distribution program.

A special one-cent sale on Bon Ami cleanser is currently in progress in the Detroit area. The one-cent sale combination is a special pack consisting of three cans locked in an imprinted sleeve. Customers get one can for one cent with the purchase of two cans at the regular price. These three-can packs are offered to the trade twenty-four to the case, or seventy-two cans.

Cassia, Anise Discussed

The current issue of *D & O News*, external house organ of Dodge & Olcott, Inc., New York, reviews the supply situation of cassia and anise oils, both casualties of the China blockade, which have virtually vanished from the market. Replacement materials made by D & O include cinnamic aldehyde and cassia synthetic 173, and anise imitation K-254. Anethole, an important derivative of anise, is also obtained by fractionation of pine oil in the United States.

Also mentioned are new perfume compounds specially designed for use in creams, soaps, shampoos, and shaving creams.

New Breck Baby Soap

"Baby Breck" soap containing hexachlorophene was introduced recently by John H. Breck, Inc., Springfield, Mass. The new soap is individually wrapped and comes in boxes of three at $8 per dozen boxes. It retails at $1 per box, or 35 cents for an individual cake.

Hollenberg Van Dyk Pres.

I. R. Hollenberg, for the past three years executive vice president and general manager of Van Dyk & Co., Belleville, N. J., was recently elected president of the company. He joined Van Dyk as a chemist at its former plant in Jersey City in 1935.

Mr. Hollenberg is also executive vice-president and general manager of Van Dyk's affiliate, Summit Chemical Products Corp., Belleville, producer of ammonium thioglycollate, the active ingredient of cold waving solutions.

C-P-P Names Hoff

Appointment of Irvin W. Hoff as advertising manager was announced recently by Colgate-Palmolive-Peet



IRWIN W. HOFF

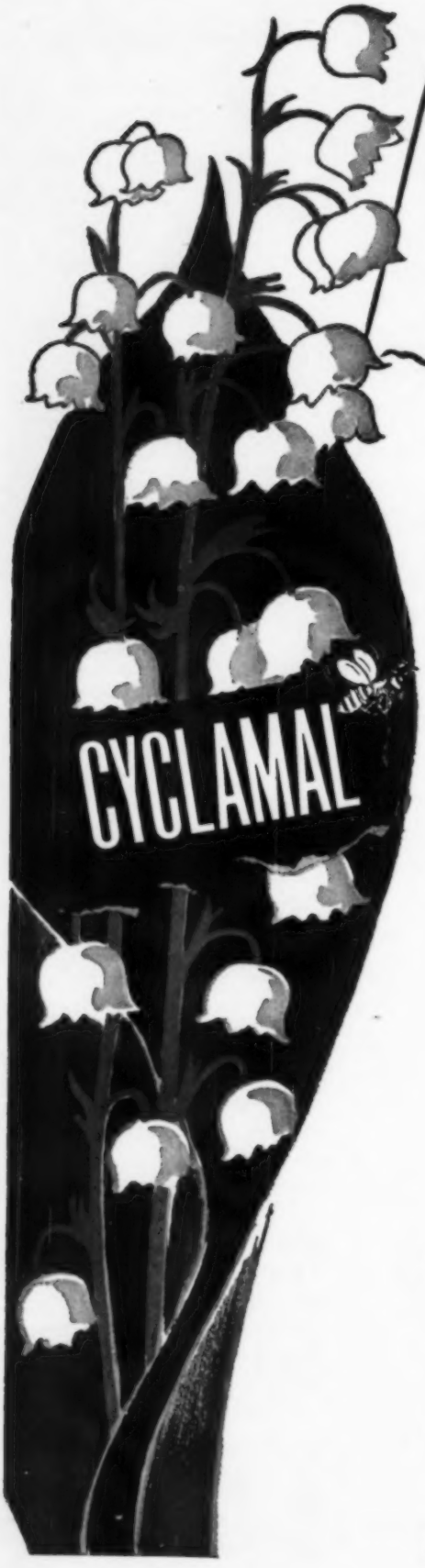
Co., Jersey City. He succeeds Robert E. Healey who was vice-president in charge of advertising. Mr. Healey is now a vice-president of McCann, Erickson Inc., New York. Mr. Hoff joined Colgate as assistant advertising manager in 1949. Previously he was sales and advertising manager of the Block Drug Co., and product director of Johnson & Johnson.

Evans Joins S.D.P.A.

Joseph B. Evans, director of sales for Dexter Chemical Corp., New York, was recently appointed to the regional advisory committee of the Small Defense Plants Administration. This agency was established to further small business participation in the national mobilization program. The committee to which Mr. Evans has been assigned serves Region II, including the states of New York and New Jersey.

P&G Builds Paper Plant

Buckeye Cellulose Corp., subsidiary of Procter & Gamble, Cincinnati, recently started construction of its planned $20 million plant in Foley, Fla., for the manufacture of nitrating and dissolving wood pulps. When completed in the fall of 1953 the plant will produce about 100,000 tons of pulp a year using 250,000 cords of pulpwood annually. It will employ about 500 workers.



It holds its scent

...its scent holds your customers

Use CYCLAMAL® as base for the fragrance in your soap, perfume, cream or powder and it will reach the *consumer* with all its original odor value intact.

CYCLAMAL . . . one of Verona's many high grade specialties . . . continues to maintain wide acceptance as the *principal raw material* for Lily-of-the-Valley, Lilac and other floral perfumes. *Here's why:*

CYCLAMAL is an *aldehyde* five times more potent than Hydroxycitronellal with which it blends harmoniously.

CYCLAMAL gives you what you pay for . . . a *persistent* and *true floral scent* . . . plus the all-around *quality* that keeps your product odor fresh to the ultimate consumer.

No irritation or discoloration from this outstanding product!

For *Exclusive* Odors . . . Try *Verona*

Have our Compound Laboratory devise a fragrance *all your own* . . . for the enhanced prestige and profitability of *your* product.

OTHER VERONA SPECIALTIES INCLUDE:

Amuskal • Ambre E-342
Opoponax Ambre E-392 • Aldehyde E-317
Rose E-131 • Ionones • Floranol

SOLE AGENT IN THE U.S.A. FOR J. & E. SOZIO, GRASSE, FRANCE
Resinoides • Essential Oils • Natural Absolutes

AROMATICS VERONA DIVISION

VERONA CHEMICAL COMPANY • 26 VERONA AVE., NEWARK, N. J.



paper sculpture by gorecka-egan

LONG ON EXPERIENCE

For over fifty years, Niagara has been supplying top-quality chemicals to industry. In that time it has achieved a position of leadership as a supplier of chemicals for soap-making and for sanitary chemicals.

NIALK®

Caustic Soda
Caustic Potash
Carbonate of Potash
Paradichlorobenzene

NIAGARA ALKALI COMPANY

60 East 42nd Street, New York 17, N. Y.

Liquid Chlorine • Caustic Potash • Carbonate of Potash • Paradichlorobenzene • Caustic Soda • TRICHLORethylene
NIAGATHAL® (Tetrachloro Phthalic Anhydride)

Triple Victory

IN MACAULAY'S FAMOUS POEM, Horatius stood before the narrow bridge to Rome and saved the city by slaying Lars Porsena's three ablest warriors.

Now, no one's going to write poetry about IONOL® . . . . the antioxidant that is proving so successful in essential oils . . . but there *is* a parallel!

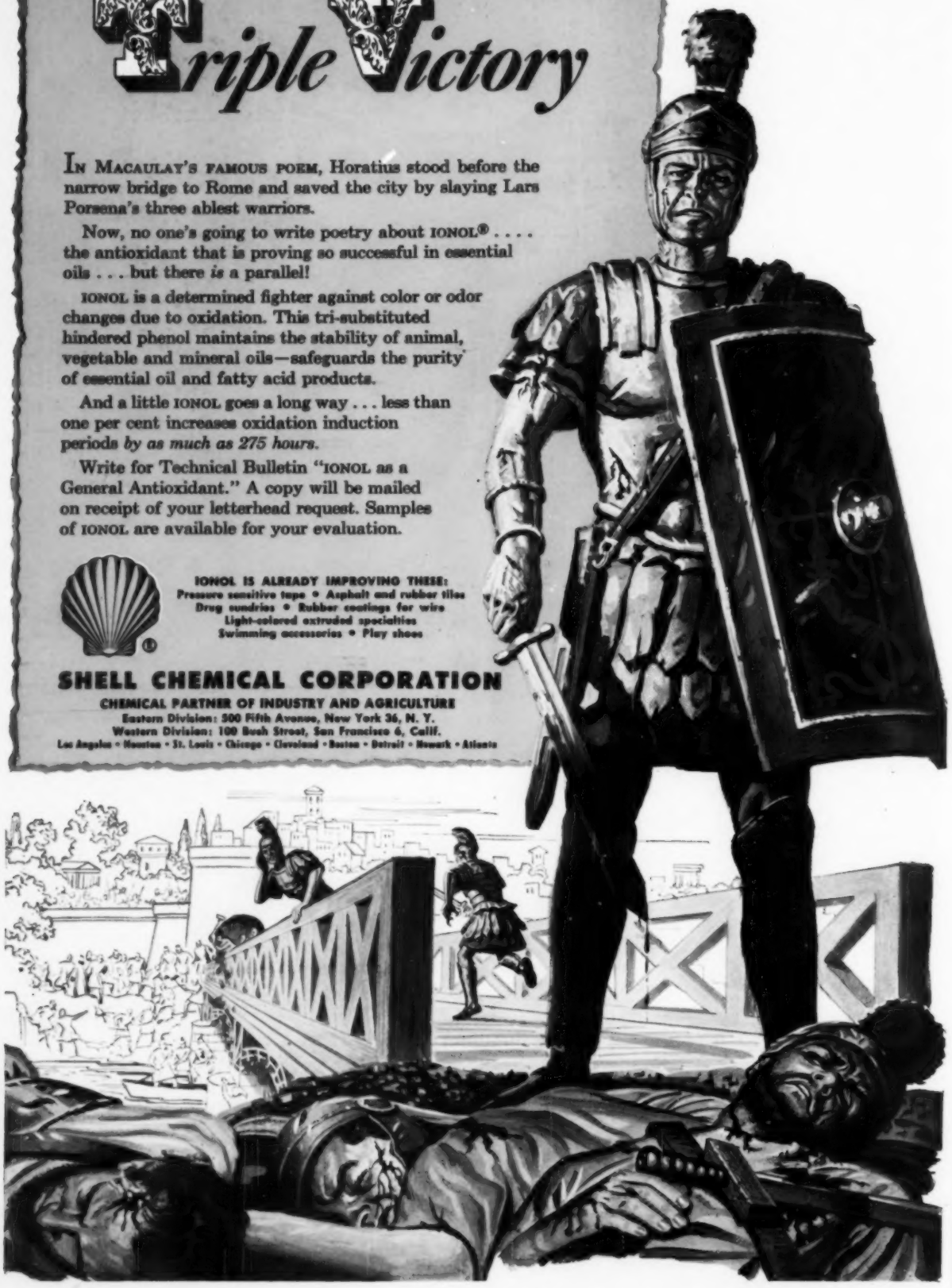
IONOL is a determined fighter against color or odor changes due to oxidation. This tri-substituted hindered phenol maintains the stability of animal, vegetable and mineral oils—safeguards the purity of essential oil and fatty acid products.

And a little IONOL goes a long way . . . less than one per cent increases oxidation induction periods *by as much as 275 hours.*

Write for Technical Bulletin "IONOL as a General Antioxidant." A copy will be mailed on receipt of your letterhead request. Samples of IONOL are available for your evaluation.

IONOL IS ALREADY IMPROVING THESE:
Pressure sensitive tape • Asphalt and rubber tiles
Drug sundries • Rubber coatings for wire
Light-colored extruded specialties
Swimming accessories • Play shoes

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NEW Trade Marks

THE following trade marks were published in recent issues of the *Official Gazette* of the U. S. Patent Office in compliance with section 12(a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the *Gazette*. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of $25 must accompany each notice of opposition.

Sila-Glaze — This for cleaner and polish for automobile, metal and wood finishes. Filed June 23, 1950 by Trade Winds Inc., Newark, N. J. Claims use since June 14, 1950.

Gleamaid — This for bleach. Filed June 13, 1949 by J. D. Schwartz, El Paso, Texas. Claims use since May 28, 1949.

Sulfox-Cide—This for synergist for pyrethrins, allethrin, rotenone, etc. Filed July 28, 1950 by S. B. Penick & Co., New York. Claims use since February 14, 1950.

Fitch — This for shampoo. Filed June 25, 1951 by Grove Laboratories, Inc., St. Louis, Mo. Claims use since 1948 on the mark as shown, since 1893 on the word Fitch.

Emerel — This for cleaning compositions for floors, etc. Filed August 4, 1951 by S. C. Johnson & Son, Racine, Wis. Claims use since May 9, 1951.

Man-Lab—This for self-polishing floor wax. Filed January 5, 1950 by Manufacturing Laboratories, Inc., Boston, Mass. Claims use since December 22, 1949.

Estate—This for wax polishes for floors, furniture, metallic surfaces, in liquid cream of paste form. Filed November 15, 1950 by John M. Wilczewski, New York. Claims use since April 1945.

Cand-Dox — This for self polishing wax. Filed August 28, 1951 by Candy & Co., Chicago. Claims use since August 6, 1951.

Pheno-Cen — This for chemical solution for use as germicide, antiseptic, and disinfectant. Filed February 4, 1949 by Central Chemical Co., Kansas City, Mo. Claims use since June 15, 1938.

Pearl—This for white floating bar soap. Filed July 5, 1947 by Procter & Gamble Co., Cincinnati. Claims use since January 2, 1884.

Budgit — This for chemical washing compounds. Filed October 8, 1949 by Benzion Nussdorf, New York. Claims use since April 30, 1949.

Doubledaye AA Brand — This for cleaners for linoleum, cork, asphalt, ceramics, etc., for textile soaps and detergents, glass cleaners, toilet and wash bowl cleaners, drain cleaners, toilet soaps, laundry soaps, industrial soaps, synthetic detergents, dishwashing compounds, and grease solvents. Filed October 5, 1950 by Milton Honor Aspden, Greensboro, N. C. Claims use since September 21, 1942.

Fiebing's Care—This for leather wax dressing and preservative. Filed March 3, 1950 by Fiebing Chemical Co., Milwaukee. Claims use since November 1949, since 1895 as to the word "Fiebing's."

Kwik-Mist—This for dispensers of the aerosol type containing insecticides. Filed October 14, 1950 by Knapp-Monarch Co., St. Louis. Claims use since October 3, 1945.

Anti-K — This for chemical preparation designed as a rat and mouse killer. Filed June 18, 1951 by Milner Products Co., Jackson, Miss. Claims use since April 19, 1951.

Ivory—This for soap. Filed December 6, 1949 by Procter & Gamble Co., Cincinnati. Claims use since 1879.

It's a Pip—This for concentrated liquid shampoo. Filed December 12, 1949 by France Laboratories, Inc., South San Francisco. Claims use since November 21, 1949.

Dearcon — This for synthetic detergent to be used in shampoos, etc. Filed July 7, 1950 by Shulton Inc., New York. Claims use since June 26, 1950.

ICL—This for powdered, liquid and cake soaps; cleaning compounds for metal, porcelain, enamel, glass, tile, rubber, and boilers; for sweeping compounds, soot remover, etc. Filed May 4, 1951 by Industrial Chemical Laboratories, Inc., Omaha. Claims use since March 1, 1951.

Safe-T-San—This for slip retardant floor polish. Filed July 28, 1950 by Huntington Laboratories, Inc., Huntington, Ind. Claims use since July 14, 1944.

Bodygard—This for liquid material including wax and providing a coating of film particularly for protective and preservative purposes, and for polishing, for use on automobiles and other painted and lacquered surfaces. Filed January 18, 1951 by Simonize Co., Chicago. Claims use since September 1, 1950.

Gam Kil—This for insecticides. Filed August 9, 1949 by Food Machinery and Chemical Corp., San Jose, Calif. Claims use since March 1, 1949.

Estomite—This for insecticides. Filed September 15, 1951 by Eston Chemicals, Inc., Los Angeles. Claims use since July 30, 1951.

Zeb—This for insecticides. Filed October 8, 1951 by Southern Agricultural Insecticides, Inc., Palmetto, Fla. Claims use since November 6, 1947.

Predent — This for dentifrice. Filed June 22, 1951 by Lambert Pharmacal Co., St. Louis, Mo. Claims use since June 5, 1951.

Theradent—This for dentifrice. Filed June 22, 1951 by Lambert Pharmacal Co., St. Louis, Mo. Claims use since June 5, 1951.

Chlorodent—This for dentifrice. Filed September 14, 1951 by Lever Brothers Co., New York. Claims use since June 22, 1951.

French Provincial — This for toilet soaps. Filed July 26, 1950 by Parfumerie Provecal, Inc., New York. Claims use since July 10, 1950.

Oakite at Meat Show

Oakite Products, Inc., New York, was the lone representative of the sanitary maintenance industry at the 11th annual convention of the National Independent Meat Packers Association in Chicago recently. Sanitation for smoke house walls was the theme of Oakite's exhibit which featured the company's hot spray unit and also their steam gun for cleaning packing house operating areas. Ken C. Tucker, head of Oakite's food industry division, had charge of the presentation.

First Quarter Soap Sales

Sales of soaps and synthetic detergents for the first quarter of 1952, in pounds, exceeded those of the fourth quarter of 1951 by 10.7 percent, according to a recent announcement of the Association of American Soap & Glycerine Producers, Inc. Sales reported were 17.8 percent below the first quarter of 1951, which was abnormally high due to the Korean emergency.

Solid soaps and synthetic detergents sold by reporting companies during the first quarter of 1952, amounted to 832,875,000 pounds, as compared with 753,372,000 pounds for the fourth quarter of 1951, and 1,016,667,000 pounds for the first quarter of 1951.

Liquid soaps and detergents reported sold in the first quarter of 1952 totalled 2,769,000 gallons, as compared with 2,381,000 gallons in the fourth quarter of 1951 and 3,009,000 gallons in the first quarter of 1951.

Sales of synthetic detergents during this first quarter 1952 totalled 354,064,000 pounds for reporting companies, compared with 318,453,000 pounds in the fourth quarter of 1951, and 333,601,000 in the first quarter of 1951.



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Bids and AWARDS

QM Low Soap Bids

Low bids on 50,000 pounds of soap powder in 100-pound containers (item 1); 60,000 pounds of synthetic detergent (item 4); and 500,000 cakes of toilet soap (item 5) for a, Memphis, and b, Paulini, Kans., in a recent opening for miscellaneous supplies by Army Quartermaster Corps, New York, were submitted by: Continental Soap Corp., Chicago, item 1, f.o.b. 9.15 cents, 1a, 9.98 cents, and 1b, 9.9 cents; Procter & Gamble Co., Cincinnati, item 5, f.o.b. Cincinnati 3.74 cents, 5a, 3.97 cents, 5b, 4.08 cents, unwrapped; Washington Chemical Sales Co., Washington, D. C., items 4 a and b, 12.75 cents.

Navy Laundry Soap Bids

In a recent opening for miscellaneous supplies by the New York Navy Purchasing Office, New York, the following low bids were received on these items of laundry soap powder: 1a, 5,000 lbs., Brooklyn, N. Y.; 1b, 160,000 pounds, Bayonne, N. J.; 1c, 10,000 pounds, Cherry Point, N. C.; 1d, 10,000 pounds, Pensacola, Fla., 1e, 15,000 pounds, Corpus Christi, Texas; 1f, 15,000 pounds, Long Beach, Calif.: 1a, 7.5 cents, and 1b, 7.28 cents, Armour & Co., Chicago; 1a, 7.47 cents, and 1c, 8.72 cents, John T. Stanley Co., New York; 1d, 8.28 cents, Tennessee Soap Co., Memphis; 1e, 8.6 cents, Gillam Soap Works, Fort Worth, Tex.; 1f, 7.24 cents, Procter & Gamble, Cincinnati.

Navy Toilet Soap Bids

In a recent oepning for miscellaneous supplies by the New York Navy Purchasing Office, New York, the following low bids were received on soap powder, item 1, 10,000 pounds, item 2, 70,000 pounds, a, Long Beach, Calif.; b, Portsmouth, N. H.; c, Bayonne, N. J.; d, Norfolk, Va., e, Mare Island, Calif.; f, Seattle, from the following firms: Spazier Soap & Chemical Co., Santa Monica, Calif., item 1, 7.51 cents; North Coast Chemical & Soap Works, Seattle, item 2, 8.47 cents, f.o.b. Seattle; Newport Soap Co., Oakland, Calif., item 2 e, 6.89 cents, and item 2 f, 8.51 cents; Continental Soap Corp., Chicago, item 2 b, 9.73 cents, and item 2 d, 8.8 cents; Diamond Chemical Co., Maspeth, N. Y., item 2 c, 8.626 cents.

Low Bids on Hand Cleaner

Low bids on 7,400 pounds of hand cleaner for a, Newport, R. I., b, Brooklyn, N. Y., c, Norfolk, Va., d, Yukon, Fla., e, Corpus Christi, Tex., f, San Pedro, Calif., g, Oakland, Calif., and h, Seattle, Wash., in a recent opening for miscellaneous supplies by the New York Navy Purchasing Office, New York, were submitted by Hillcrest Laboratories, Spring Valley, N. Y., with bids of a, 17 cents; b, 16 cents; c, 17.5 cents; d, 19 cents; and by Dickey Manufacturing Co., St. Louis, Mo., with e, 20.68 cents; f, 22.7 cents; g, 22.7 cents; and h, 22.7 cents.

DDT Bids for UN

Bids for something over a million pounds of technical DDT for the United Nations were listed recently in New York. Low bidder was John Powell & Co., New York, at 35.8c per pound. Other bids were Michigan Chemical Co., St. Louis, Mich., 36.2c; Kolker Chemical Division of Diamond Alkali, Newark, N. J., 38.22c; General Chemical Division of Allied Chemical, New York, 39.6c; Du Pont, Wilmington, 40c; Niagara Chemical Division of Food Machinery, Niagara Falls, N. Y., 41.7c; Wyandotte Chemicals, Wyandotte, Mich., 42c; Pittsburgh Plate Glass, Pittsburgh, 42c; Chemical Industries, Ltd., Canada, 42c; R. W. Greeff & Co., New York, 45c; Geigy Co., New York, 45c; Pennsylvania Salt Mfg. Co., Philadelphia, 50.25c lb. (The current market for technical DDT at the time these bids were filed was approximately 45c lb.)

In addition to technical DDT, bids for between one and two million pounds of 75% DDT wettable powder were also submitted to the United Nations at the same time by most of the bidders on the technical material and by other firms. Low bidder for this wettable material was also John Powell & Co. with a figure of 35.48c lb. On the whole, the prices for the wettable powder approximated those for the technical DDT.

Low Bid on Floating Soap

A recent opening for miscellaneous supplies by the New York Navy Purchasing Office, New York, included 50,000 pounds of white floating soap for a, Portsmouth, N. H.; b, Bayonne, N. J.; and c, Norfolk, Va. Low bids were submitted by Stahl Soap Corp., Brooklyn, N. Y.: a, 10.37 cents; b, 9.67 cents; c, 10.27 cents; and f.o.b. 9.47 cents, unwrapped.

Low Navy Soap Bids

Low bids on borax compound toilet soap for a, Oakland; b, Mare Island, Calif.; c, Clearfield, Utah; d, Seattle; e, Bremerton, Wash.; in a recent opening for miscellaneous supplies by the New York Navy Purchasing Office, New York, were submitted by Economics Laboratory, St. Paul, Minn.; destination a, 6.76 cents; b, 6.81 cents; c, 8.61 cents; d, 7.86 cents; e, 7.72 cents; and f.o.b. Santa Clara, Calif., 6.58 cents.

Low Laundry Soap Bids

In a recent opening for miscellaneous supplies by New York Navy Purchasing Office, New York, low bids were submitted by Lever Brothers Co., New York, on 75,000 pounds of laundry soap for a, Brooklyn; b, Bayonne; and c, Norfolk, Va.: destination a, 4.824 cents; b, 4.834 cents; c, 5.493 cents; f.o.b. 4.36 cents.

FSS Floor Wax Bids

A recent opening for miscellaneous supplies by Federal Supply Service, New York, included floor wax, item 1, 4,400 gallons in 55-gallon drums, and item 2, 10,150 gallons in five-gallon cans for a, Washington, D. C., and b, San Francisco. Low bidders were Kem Products Corp., Brooklyn, with 60.5 cents on item 1, and 64 cents on item 2a; and Veneer-O-Wax Corp., Camden, N. J., with 66 cents on item 2b.

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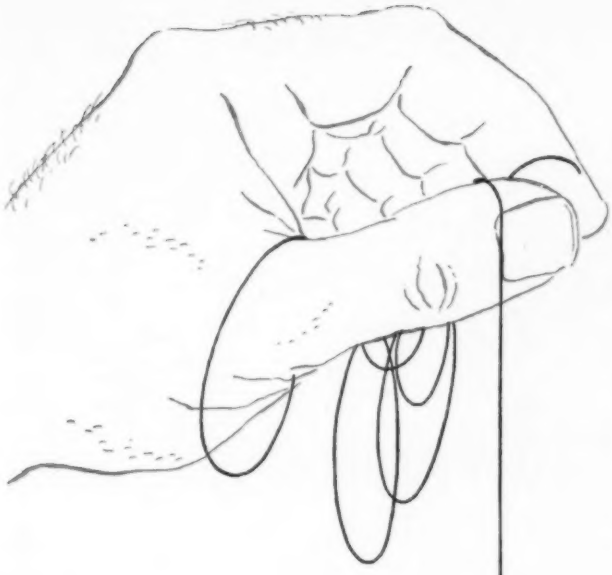
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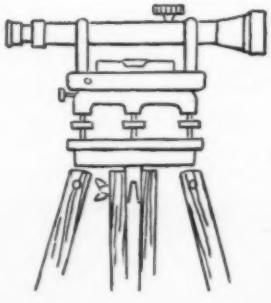
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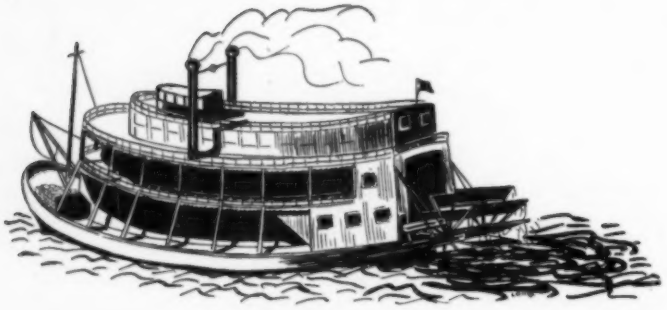
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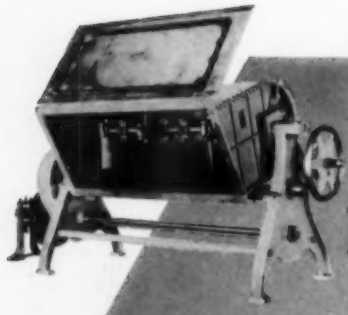
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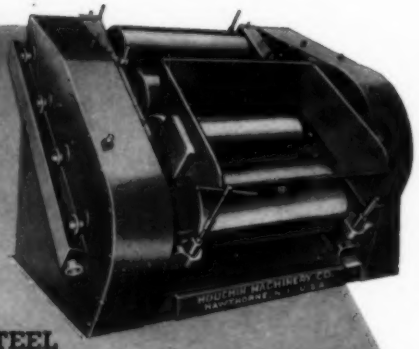
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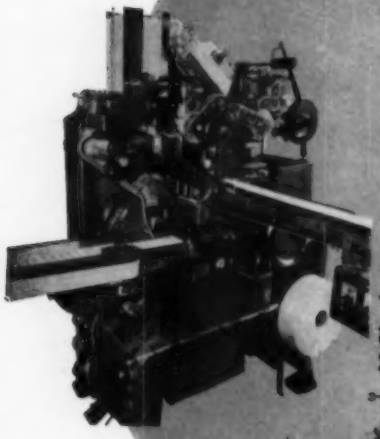
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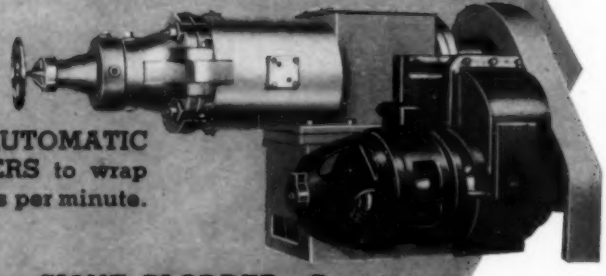
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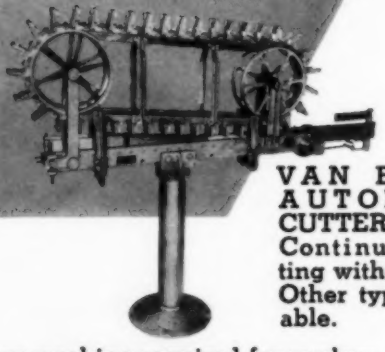
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Detergency Measurement

By E. H. Armbruster and G. M. Ridenour*
Research Associate and Associate Professor in
Public Health Engineering, School of Public Health,
University of Michigan

HOW can the degree of cleanliness of a surface be measured? The voluminous literature of recent years concerned with detergent testing and rating attests to the difficulty of such a determination. It is easy to measure how dirty a surface is if it is dirty enough and if the soil consists of certain specific types. It is also quite easy to obtain an accurate measure of specific detergent properties such as surface tension, alkalinity, emulsification, etc.. by the use of present chemical methods. However, when compounds are formulated around these principles, the cleansing performance may or may not produce the desired result, that is, removal of soil from the surface. For this reason it is necessary to have laboratory performance procedure to judge the performance of detergents. Unfortunately, the laboratory performances do not always correlate with the field experiences. This is largely due to lack of sensitivity, accuracy or reproducibility of the test method.

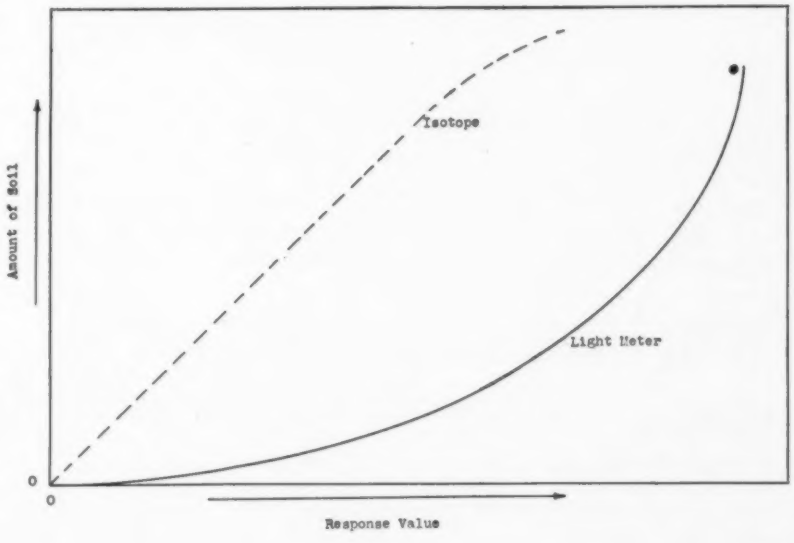
Even the most sensitive gravimetric methods are obviously inadequate because of the relatively small amounts of soil present in relation to weight of the material to be cleaned. Even small differences in moisture content of the soil or carrier will introduce large errors in determining soil residuals.

Most procedures use an artificial soil which has an incorporated indicator. Carbon black, an ingredient representing a solid type of soil, is most frequently used to provide the index of soil removal as measured by either reflectometer or light transmission techniques. The amount of carbon removed from the test surface is measured in the resulting degree of whiteness. In the case of fabrics, a situation is often present where carbon which has penetrated deeply into the fibres produces a higher whiteness value than a second cloth which has the same amount of soil deposited on the surface. Another disadvantage of carbon is that it may be removed with greater or lesser ease than other components of the artificial soil for which it is the only indicator. Despite the fact that carbon is considerably different from other solid soils in its physical properties affecting detergency, to date it has proven to be the most valuable tool in measuring standard soil residuals.

Another class of soil indicators which have been used less extensively in the U. S. are dyes which lend themselves to measurement by fluorescence or more directly, by color intensities. While relatively easy to measure, the results are unreliable because (1) the factors affecting their removal are not similar to the factors affecting the removal of the various types of soil from fabric, (2) the measurement of small soil residuals tends to be inaccurate, (3) many of these dyes are affected by pH changes.

In all of the measurements of soil residuals embodying principles of light measurement, there are two additional errors which have frequently been overlooked. The first is the erroneous assumption that the reflectance or fluorescence from clean or

Figure I. Comparison between light meter response and isotope response.



* Paper presented before 38th midyear meeting, C.S.M.A., Boston, June 9, 1952.



A lining for tank cars which is only 1/50th of an inch thick—scarcely more than a film—first made practicable the shipment of liquid caustic soda in high concentrations without metallic contamination. As numerous processes necessitate the use of caustic in its purest form, this Columbia-Southern development has enabled many companies to effect economies in their use of this essential raw material.

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soiled surface is a linear function of the amount of soil present. Actually it has been found that this cannot be taken as a direct measure of the quantity of soil present. In fact, the sensitivity of the light value obtained, as a measure of the quantity of soil on a surface, depends largely on the level at which the test is performed. Therefore one unit of light meter response at the soiled level of the surface may be equal to 5 percent of the soil, but often the surface has been cleaned and the reading is made on a different level of soil, the unit of response becomes equal to about 0.3 percent of the soil. (See Fig. I.) Therefore it can be easily seen that the sensitivity as well as accuracy of this test method decreases as the surface becomes cleaner.

The lack of sensitivity of these procedures provides the second error which has often been overlooked or minimized in interpretation of data. Recent reports (1, 2) have shown that the percent soil removal is directly proportional to the amount of soil applied. In fact recent tests (2) in our laboratories have shown that appreciable amounts of certain soils on surfaces enhance removal. Tests involving light measurements require relatively large amounts of soil for accuracy and reproducibility of the laboratory procedure. Therefore it is quite possible that this soil requirement may be a factor in laboratory tests failing to correlate with field experience. Obviously a test procedure is necessary which will simulate the detergency requirement of the field in respect to quantity of soil as well as types of soil. This latter requirement is especially true in the testing of laundry detergents.

The problem of an absolute measure of the amount of soil existing on a surface or fabric is one which has been a subject of research for three years at the School of Public Health, University of Michigan. (3) This project has been sponsored by the National Sanitation Foundation in cooperation with industry. As a part of this research the use of radioactive materials to implement the studies was investigated and as a result has become a major part of the work. It is the purpose of this paper briefly to describe the advantages and disadvantages of these substances in detergency measurements and to cite some specific types of use.

Advantages and Disadvantages

THE use of radioisotopes has opened an entirely new vista in the field of detergent evaluation. The accuracy and sensitivity which is possible in radiological measurements exceeds that obtained by light measurements. This is because a linear response is obtained for even minute amounts of soil. In fact the only place the response becomes non-linear is in high concentrations of soil where, due to the soil thickness, a self adsorption of the radioactivity may manifest itself. (see Fig. I). The onset of this self adsorption phenomena will manifest itself at different levels of soil depending on the energy level of the isotope used. In most detergent studies the practical amount of soil to be used will fall below the onset of self adsorptive levels, even with fairly low level isotopes. But if the experimental conditions were set up in the range, simple accepted procedures are available to correct for non-linear response due to self adsorption. The work of Harris, (4) et al. compares the sensitivity of the radiological procedures with other methods which have been proposed for measuring residuals on metallic surfaces. They found that the comparative sensitivities of the various methods for estimating cleanliness are, using the fluorescent dye method as unity:

Radioactivity	110
Water break.....	11
Fluorescent dye	1

This extreme sensitivity and linear response also provide for accuracy and reproductivity in results unobtainable by other procedures.

Norris and Ruchhoft (1) have shown that the percent soil removed from a surface by a detergent is in direct relation to the amount of soil present. If sufficient soil is present, a high percentage soil removal can be obtained without the use of any detergent. Therefore the efficiency of a specific detergent will vary from high to low depending on the amount of soil present. Since the sensitivity of radiological response is high, the amount of soil to be used can be very slight in comparison with other methods thus providing a means of measuring the soil removal by actual detergency instead of mechanical action.

The results of a detergency test are influenced by the particular test soil being used. The adaptability of radio-isotopes is such that almost any single soil or combination of soils may be employed thus permitting the use of a variety of natural soils. The fact that a radioactive element is included in the makeup of the compound does not influence its chemical or physical properties.

The color of the surface to be cleaned will not affect the final results if the surfaces are of the same type. By use of appropriate techniques it is possible to compare the deterging action of a compound on two or more disimilar types of surfaces.

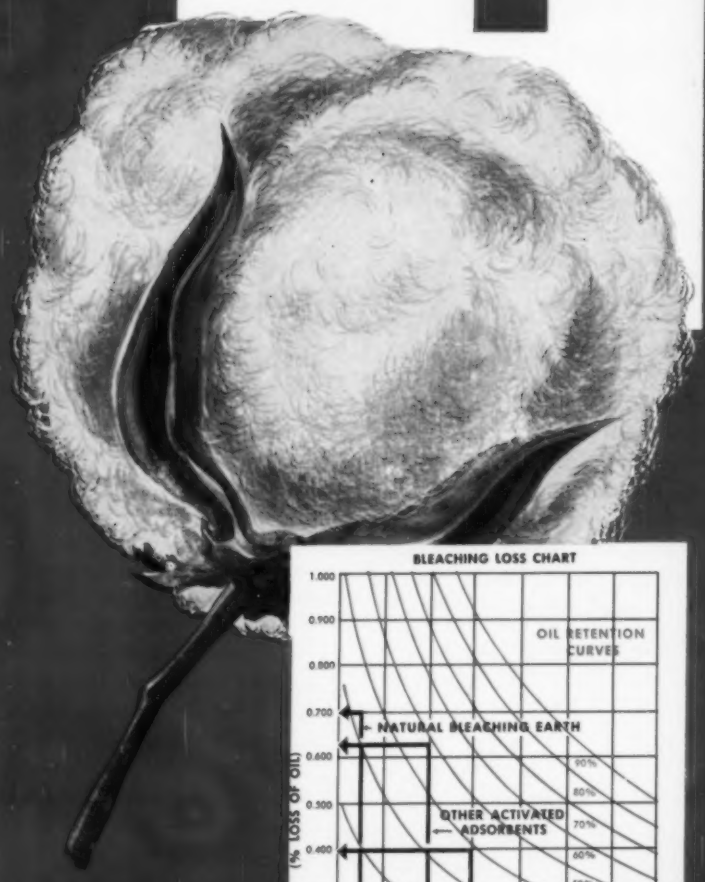
The effect of various water characteristics on the washability or rinsability of compounds can also be evaluated under the actual use conditions.

Autoradiograph techniques permit the study of film buildup from the first layers which are invisible to the naked eye. This same procedure provides a means of obtaining test patterns from materials and soils which heretofore were unobtainable by ordinary photographic means.

Inherent to the radiological procedures are some disadvantages not common to other methods. The first and most publicized is that of exposure of the workers to radiation. The magnitude of this danger will depend on the isotope with which the work is being carried out. But techniques have been developed in which even the so-called dangerous substances can be handled safely. The disposal of used material also creates special problems which have to be treated separately. Probably the greatest disadvantage lies in the difficulty of removing residual radioactivity from test equipment and materials after a test run. The reason for this difficulty is due in part to

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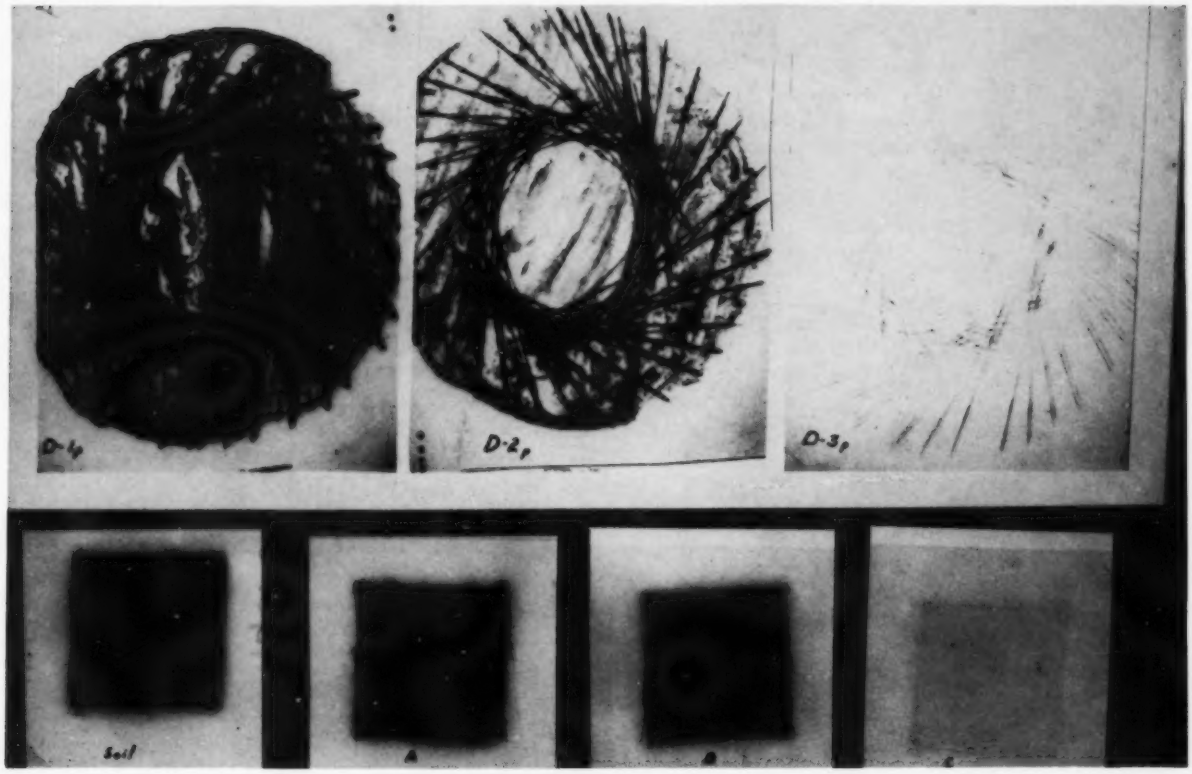


Plate I. Autoradiographic comparison of results of different cleaning operations on soiled plates and soil cloth swatches.

the inability of the present detergents to remove all residuals.

Type of Examples of Use

THE general procedure used in radiological studies of this kind is much the same as by other performance tests. The adaptability of isotope tracer procedures to various types of detergency problems can be best shown by citing examples of how they have been successfully used.

One of the projects sponsored by the National Sanitation Foundation at this school was on automatic laundry machine bacteriology (5). This study was brought about by numerous inquiries to the Foundation concerning the possible spread of disease in self service laundries. Very early in the work it became apparent that the present bacteriological procedures alone were entirely inadequate to measure bacteria residuals on cloth. Since the primary reason for laundering is to remove soils including bacteria, and since the type of washer load often restricts ordinary sanitizing procedures, the emphasis on this phase of the work was placed on bacteria residuals on cloth. Therefore the bacteria were tagged with a radioactive element and traced by means of a Geiger tube and scaler. Phosphorus —32 was the isotope of choice since it is possible to incorporate very easily this substance into the structure of many living bacteria, thus effectively tagging them while not producing any change in their normal characteristics. Known numbers of bacteria were then deposited on test cloths and the activity determined with a G.M. Tube and Scaler. The material was washed and recounted radiologically. When indicated the wash and rinse waters were collected for activity measurements also. Redeposition was measured by adding unseeded test cloths to the load and measuring the pick-up of radioactivity. Thus the use of isotopes permitted study of a natural type soil which heretofore could not be measured with any appreciable degree of accuracy. Since bacteria in themselves may act as colloids, it was possible to mix radioactive organisms in various soils and use them as indicators of soil removal. One very interesting observation came to light in this way. It was found that bacteria removal from cloth is much more easily accomplished when they are in the presence of extraneous soils than when they are adsorbed on the cloth in a soil free state. Another very interesting observation was that the different types of bacteria vary greatly in their ease of removal. Also, practically all the removal that is accomplished is done during the wash cycles with the rinses contributing little or nothing to removal. A second wash cycle was also found to be of questionable value.

The second project was concerned with the cleanability of various types of multiple use eating utensils (2). Here again bacteria were used as the indicator of choice since they are naturally present in soils and their presence is related directly to public health problems. Our interest was that of first securing maximum cleanability, and then sanitization, instead of substituting sanitization procedures for cleanliness. Effective chemical

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sanitization is accomplished only on a relatively soil free surface. As before, the test organisms were made radioactive with P^{32} in order to provide easier and more accurate methods of measuring residuals. Once again it was interesting to find that the different types of organisms were removed with different degrees of ease. The removal was dependent on the type of organism used in the test. Appreciable differences were found between bacteria and several types of food soils as to ease and completeness of removal from the varied surfaces, as well as removal differences due to the types of surfaces themselves. As in the laundry study, the bacteria were removed much more readily when food soils were present. This was true even though the soils were sprayed on the plates after they had been seeded with the radioactive bacteria.

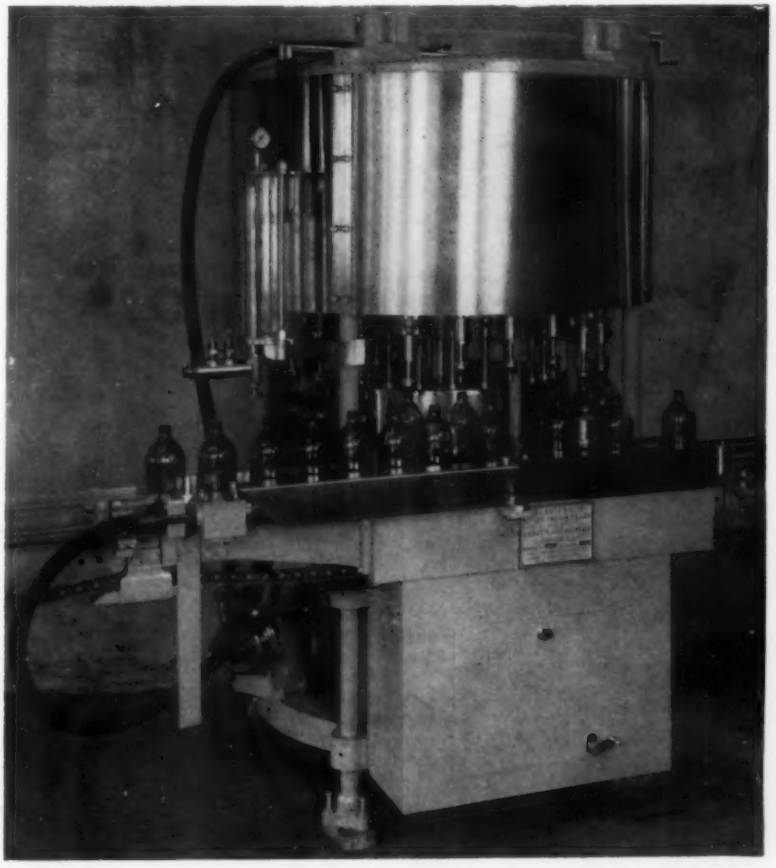
These are two examples of soil residuals and soil removal measurements from two completely different types of surfaces which require different types of operations to clean. The specific problem in both instances was one of bacteria removal and therefore the bacteria soil was used. In other specific problems, different isotopes and soils would be indicated and this is possible in radiological techniques. An example of this is the work of McCord and Robertson (*6*) in which radioactive copper was used in an oil soil to evaluate the detergent qualities of various industrial skin cleansers. These tests were done on the hands of volunteers to provide an actual use evaluation. It is interesting to note that these investigations found that imbedded soil defied eye appraisal and therefore the appearance of cleanliness was not a sufficient index of soil removal.

Carbon-14 was the isotope of choice in the work of Harris and Kemp (*7*) on the development of metal cleaners using radioisotopic evaluation methods. C^{14} tagged n-undecane added to lubricating oil constituted the test soil used.

All of the above examples of isotope tracer method involve the use of a Geiger tube and scaler to give a quantitative measure of the amount of radioactivity present. Recently autoradiographic methods have also been successfully adapted to the work being done at the University of Michigan. This new procedure enables the study of film formation and buildup as well as soil distribution and patterns. Plate I is a representative autoradiograph of a soiled plate and similar plates which were washed by different detergents. The lower half of the plate represents a soiled cotton test swatch and a series of test swatches which received different wash treatments. Visually, there was no detectable difference between any of these materials, while radiologically they represent vast differences in the amount of soil residuals.

The past decade has seen tremendous progress in detergents, methods, and apparatus to accomplish cleaning while the procedure to judge the effectiveness have remained more or less static. It is generally conceded that the past and present methods for the evaluation of cleaning processes are inadequate. Therefore in light of what has already been accomplished with radioactive tracer methods, it seems likely they will contribute a very important step forward in detergency measurements.

New U.S. Bottlers Machinery Co., Chicago, rotary vacuum filler with automatic feed and control mechanisms.



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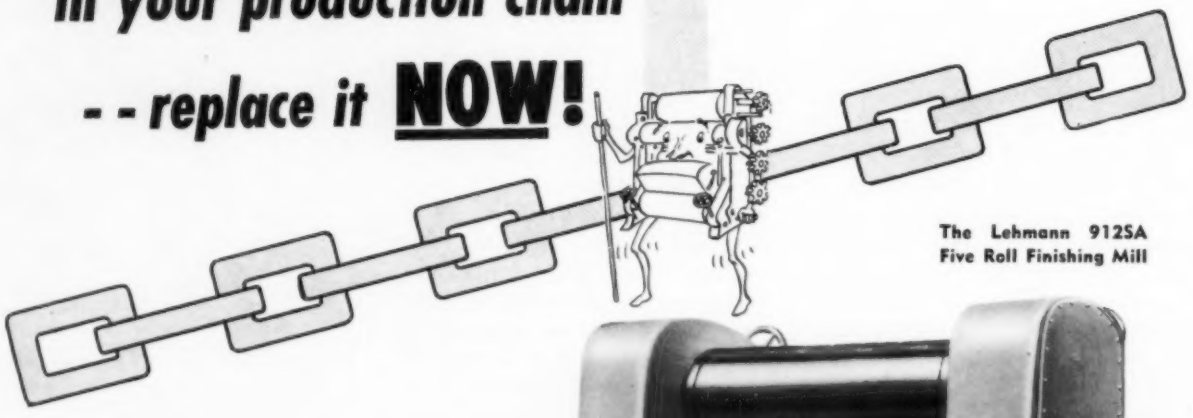
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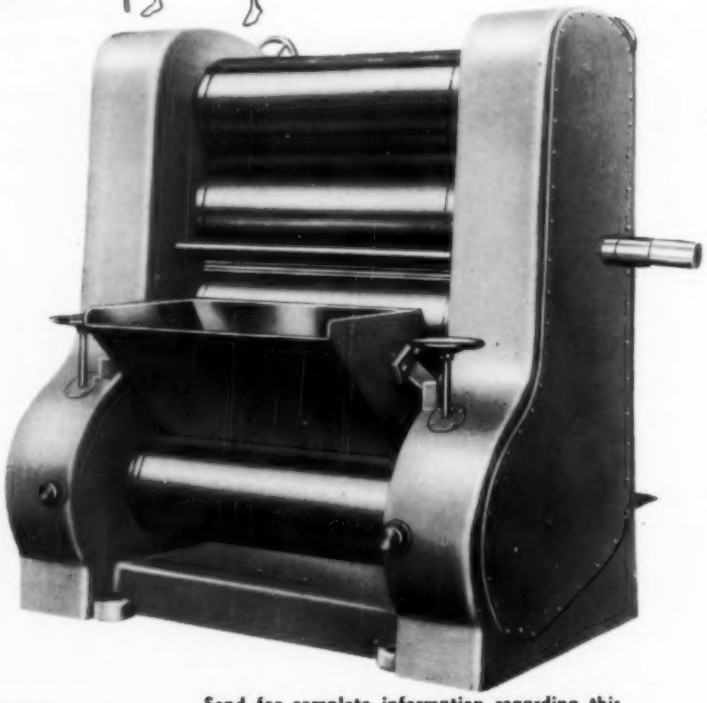
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By E. G. Thomssen, Ph.D.

Filters

IN THE sanitary chemical products industry large quantities of soaps, waxes, disinfectants, insecticides and other products in liquid form are manufactured. Numerous types of filters are employed and a considerable tonnage of filtering media is consumed. Filters are available in a wide range of sizes and types, having capacities of from a few gallons per hour to thousands of gallons per hour. The kind of filter to be selected depends upon plant conditions, capacity desired, characteristics of the liquid to be handled, available capital and similar considerations. Frequently it is practical to use one filter for several liquid products. Filters may be selected from a considerable assortment, all of which are efficient for one or several specific purposes.

In this discussion only the more common types of filters used by chemical specialty makers will be considered. These include gravity filters, filter presses, disc filters, leaf filters, vacuum or pressure filters and water filters.

The simplest filter, one that



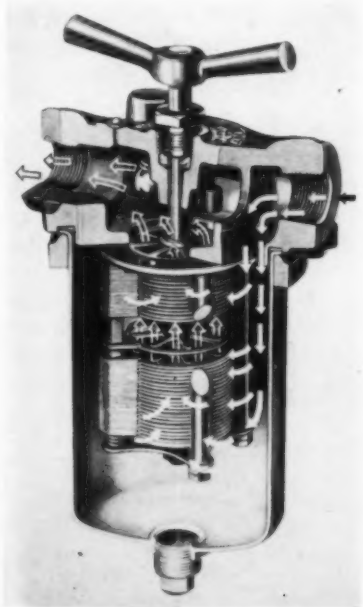
DR. THOMSSEN

operates by gravity and is frequently used in the chemical specialties industry, is a closely woven fabric bag through which the liquid strains by its own weight. When larger capacity of higher quality is required, a filter tank is commonly used. This latter piece of equipment consists of a tank with a tight-fitting inner partition, located near the top of the tank, over which cloth or woven wire is stretched. The liquid which enters at the top must seep through this cloth to gravitate to the bottom. Porous ceramics are also used in filtering. Almost any filter may operate by gravity if the head is high enough and the liquid readily passes through without clogging the machine. The use of pressure or vacuum, however, is so much more convenient and rapid in most cases that the use of gravity filters is limited. Gravity filters are, of course, convenient to use in cases where time is not a factor and economy of installation cost is desired. Continuous filtering, with a minimum of attention, is accomplished cheaply by the use of a gravity filter.

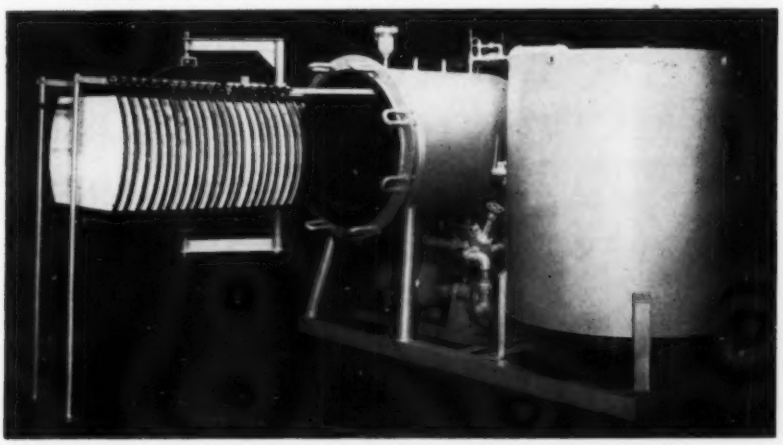
Filter presses are used very extensively, especially by those sanitary chemical plants making soaps. Various types in many sizes are available. Numerous varieties of plates are available. These include open and closed delivery presses; tilting presses; recessed plate or plate and frame presses; center, side and corner feeds; and refrigerated or steam jacketed plates. Besides this, the delivery ports may be so located to adapt the press better to specialized operations, such as washing the filter cake, or venting against air pockets in liquids. The versatility, large filtering area, cost, and ruggedness recommend filter presses for many applications.

Disc filters find their most extensive use for handling smaller quantities of liquids. They consist of a multiple of paper or pulp filters which fit over a perforated (usually round) plate assembly to give adequate support to the filtering discs. When these plates are screwed down tightly to

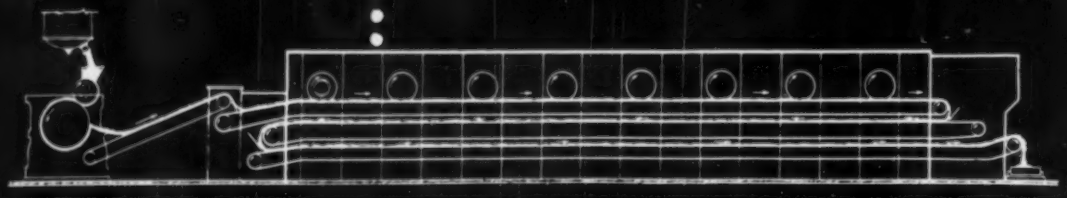
The disc type filter below is the "Auto Klean" filter made by Cuno Engineering Corp., Meriden, Conn.



The Hercules pressure leaf Model #20 filter below, made by Hercules Filter Corp., Paterson, N. J., shows door open and filter leaves or elements withdrawn from filter tank onto a removable outer cleaning rack.



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prevent seepage of liquid at the contact points, the assembly is sealed into an outer cylinder. The unfiltered liquid is usually pumped into the outer cylinder from which it seeps through the filter cloth or pulp and is discharged by suitable vents, as the filtered end-product. Disc filters may be built with but one plate or with multiple plates handling as high as 3600 g.p.h. Disc filters are versatile and are successfully used for oils, insecticides, liquid soaps, disinfectants, and other items of interest to the chemical specialties industry.

Leaf filters possess characteristics which recommend their use. These include a high rate of flow, compactness, no cloths or discs, wide capacity range, ease of cleaning and cleanliness of operation. Leaf filters consist of a series of double face, woven wire or perforated screen assemblies which fit perpendicularly into a suitable, removable cover tank. The liquid inlet is usually at the bottom of the tank and also acts as a drain. The filtered liquid emerges from the side of the tank through a manifold outlet.

A filter resembling the leaf type in outward appearance, but quite different in leaf or plate construction, is the horizontal plate filter. This filter is popular for certain operations, because it possesses certain advantages. Among these are the stability of the filter cake, ease of cleaning, ease of refrigerating or heating, low operating pressure, economy in precoating, uniformity of filtrate and compactness.

High pressure and vacuum filters are not used extensively in the sanitary chemical field. Any pump fed filter may be designated a pressure filter. A better name for high pressure filters is hydraulic filters. They find application for such specialized operations as filtering materials of the thickness of chicle for chewing gum or for pressing out such oils as cocoa butter from cocoa beans. Vacuum filters are used mainly for large scale continuous filtration, although smaller vacuum filters may be had.

In selecting a filter, it is important to give due consideration to filter cloths, the use of the right filtering media, press charging and closing accessories and the feed pump. These



Cut away view of the pressure leaf filter made by Niagara Filter Corp., Buffalo, N. Y. It is a closed pressure type alluvial-leaf filter. Within pressure tank is a series of double face metal screen assemblies.

units all contribute to filtering costs, in the form of wages or material costs. They also affect the clarity of the finished product, be it liquid or filter cake. In the case of filter cloths, particularly, the introduction of new type cloths made from such synthetic fibers as nylon offers considerably more latitude of selection than when filter paper, cotton duck and metal cloth were the only types readily available.

In cases in which the filtration directly of the liquid does not result in a clear, sparkling, end product, it is customary to add a filtering aid. If a light colored product is desired, a decolorizing agent is used. Filter aids and decolorizing agents consist of inert substances, usually of mineral origin, that possess adsorbing and absorbing properties. They may be added directly to unfiltered batches of liquids which are then vigorously agitated, or may be used to precoat the filter press so as to remove clouding substances such as colloidal particles as the product is filtered. In cases in which filter aids are used to facilitate filtering, consideration must be given in the selection of the type of filter press best adapted to the work. The ease with which the plates or discs of the press may be precoated and the facility of rapidly cleaning out the filter are important considerations.

It is good practice to consult filter manufacturers before choosing a filter.

(To be continued)

Viscosity Instruments

THE Brookfield Viscometer greatly simplifies and speeds up the determination of the viscosity of liquids in centipoises. It requires about two minutes to get a reading. The instrument may be used in the laboratory or plant and is accurate for viscosities of from minus one to 32,000,000 centipoises. Literature describing it and other viscosity appliances may be had from Brookfield Engineering Laboratories, Inc., Stoughton, Mass.

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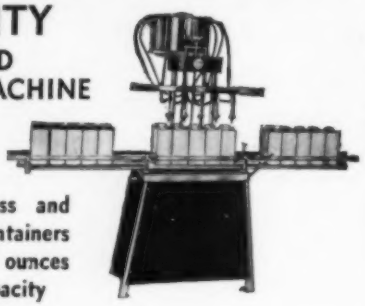
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(*Turn to Page* 102)

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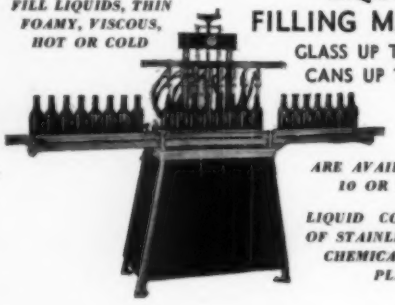


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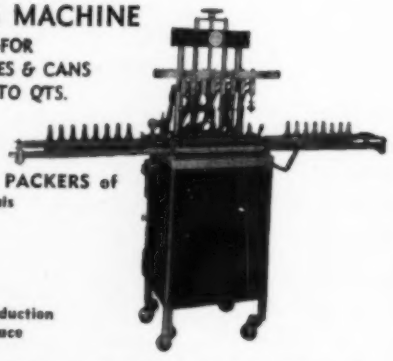
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Non-caking Cleanser

A substantially non-caking cleansing powder consisting essentially of finely divided trisodium phosphate, particles of silica as an abrasive, and an amount of from 0.1 to about three percent of a powdered anti-caking agent selected from the group consisting of metallic magnesium and compounds thereof, is described in U. S. patent 2,589,330.

Purifying Glycerine

Organic impurities are removed from glycerine by adsorption by passing it through a layer of synthetic resin gel grains of the kind used in ion-exchange processes, at an hourly speed of less than 250 c.c., and preferably less than 100 c.c. per sq. cm. of cross-section. The resin layer has a thickness of at most 100 cm., or several layers in series with a total thickness of at least 100 cm. may be used.

Liquids with a specific gravity higher than that of the liquid in which the resin grains are immersed are preferably passed in an upward direction, and vice versa. The speeds of the liquids used for regeneration of the resin gels should also be kept at the low values mentioned. Brit. patent 610,336.

Phenols in Soap

Bactericidal action of phenols in soap solution was discussed by H. Berry at a recent meeting of the Society for Applied Bacteriology, London.

He said that sparingly soluble phenols could be readily solubilized in soap solution, as for example benzylchlorophenol in potassium laurate solutions. This increased solubility was due to micelle formation, the phenol being almost entirely in the individual micelles and practically none in the free aqueous phase. Solubility increases with soap concentration until a maximum is reached, representing a maximum size of complete micelle formation. Beyond this point the micelles are apparently unable to solubilize any more of the phenol. Bactericidal action is postulated as the result of adsorption of the micelle on the cell walls, and bactericidal efficiency to be at maximum when the completely formed micelles are saturated with the phenol. It is dependent on the proportions of soap and phenol present, but independent of concentration of the mixture, since dilution may give rise to increased rates of kill. Attention was called to errors which may be inherent in the usual methods of determining bactericidal efficiencies due to bacterial clumping by the surface-active agents, and a technique was described which was designed to overcome this. *Manufacturing Chemist*, April 1952, p. 161.

Foaming Power of Oils

Stable foams have been found to form in the mixing of oils, if one of the constituents of the mixture, and one only, is a member of the coconut-palm group. This foam formation does not result from insufficient refining and the presence of mucilage, but is due to the heterogeneous glyceridic structure (simultaneous presence of long and short glycerides). After the structure has been homogenized by inter-esterification of the mixture, foaming power is considerably reduced. *Oleagineux*, 1951, VI, No. 6.

Shaving Soap Powder

Preparation of a rapidly lathering shaving soap powder requires the following ingredients: 60 kilos of stearic acid, five kilos of cocoa butter acid, 14 kilos of caustic soda solution 38° Bé, and 21 kilos of caustic potash solution 38° Bé.

The caustic solutions are heated by direct application of steam to 90° C. Then 45 kilos of stearic acid and five kilos of cocoa butter acid are melted to 85° C. The fatty acid mixture is then added gradually to the hot solution, which is stirred continuously until properly mixed. This is then stirred frequently for 30 minutes. The remaining 15 kilos of stearic acid, heated to 85° C., are then added. The soap then has an excess of one to three percent of stearic acid. 250 grams of sodium thiosulphate dissolved in 200 grams of distilled water is stirred in to prevent rancidity. Two kilos of sodium metaphosphate mixed with three kilos of lukewarm water are added to stabilize the chalk content. The soap is then poured into shallow moulds for rapid saponification.

After two days the block of soap is cut into slabs five cm. thick and dried for 14 days in a warm dry room. Afterwards it is further dried on a belt dryer for milling. After milling, it is mechanically sieved. Perfume oil and other constituents are only added to part of the powder which is sieved separately and then added to the mass of the powder.

The potassium stearate powder can be mixed with substances in amounts varying with the quality of the product to be marketed. One preparation is made up of 92 kilos potassium stearate powder, seven kilos of rice starch, 500 grams of boric acid, and 500 grams of perfume oil. Another suggestion calls for 45 kilos of potassium stearate powder, 39 kilos of common soap powder, five kilos of potassium lauryl sulphate, 10 kilos of rice starch, 500 grams of boric acid, and 500 grams of perfume oil. Antiseptics or substances for softening the hair, such as triethanolamine may also be added. *Parfumerie & Kosmetik* (1951, 32 (7), p. 215).

New Oleic Acid

A recently issued technical bulletin of Emery Industries, Inc., Cincinnati, describes an oleic acid of all vegetable origin, known as "Emersol 240" vegetable elaine. Tentative specifications for the material are: iodine value, 84-90; acid value, 191-195; saponification value, 192-196; titer, °C., 15-20; color (Lovibond, 5¼" cell), 15Y/3R maximum. According to the booklet "Emersol 240" may be used in the manufacture of high quality soaps where an oleic acid of vegetable origin is preferred. Soda and

(*Turn to Page* 101)

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NEW Patents

The information below is furnished by patent law offices of

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The data listed below is only a brief review of recently issued pertinent patents obtained by various U. S. Patent Office registered attorneys for manufacturers and/or inventors. Complete copies may be obtained direct from Lancaster, Allwine & Rommel by sending 50c for each copy desired. $1.00 for Canada. They will be pleased to give you free preliminary patent advice.

No. 2,587,990. Manufacture of Detergents and Wetting Agents From Olefins, patented by Philip J. Garner, Hooton, Wirral, and Henry N. Short, Sunbury-on-Thames, England, assignors to Shell Development Company, San Francisco, Calif., a corporation of Delaware. In a process of producing ester salts by reacting olefin-containing hydrocarbon with a polybasic inorganic acid and neutralizing the acid esters produced whereby a mixture of unreacted olefin-containing hydrocarbon, secondary alcohol corresponding to said olefin and olefin polymers is obtained, the improvement is patented which comprises contacting a substantially polymer-free portion of said mixture comprising an olefin and a secondary alcohol with a dehydration catalyst under dehydration conditions to convert said secondary alcohol to the corresponding olefin, reacting the olefinic product with a polybasic inorganic acid, and neutralizing the acid ester thus produced whereby the yield of ester salts is increased.

No. 2,594,461. Continuous Soapmaking, patented by Lowell A. Ledgett, Ridgewood, N. J., assignor to Colgate-Palmolive-Peet Company, Jersey City, N. J., a corporation of Delaware. The patent covers a continuous process of making soap comprising establishing a mass of fluid soap in an elongated reaction chamber of annular cross-section, circulating said fluid soap axially in said chamber in one direction adjacent to the inner wall thereof and axially in the opposite direction adjacent to the outer wall thereof, subjecting the circulating stream of soap in at least one zone to disruptive shear, continuously introducing separate streams of fatty material and alkali solution into said circulating stream of soap adjacent to, and in advance of, said zone of disruptive shear, and continuously withdrawing a stream of soap from said circulating stream adjacent to, but in advance of, the place of introduction of said fatty material and caustic.

No. 2,589,150. Insecticide, patented by Valerie Schneider, Phillips, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware. The patent describes an insecticidal composition containing as an active ingredient a halogenated Gray tower polymer fraction.

No. 2,588,197. Preparation of Shampoos, patented by Herbert I. Bernstein and Charles F. Fuchs, Chicago, Ill., assignors to The Emulsol Corporation, Chicago, Ill., a corporation of Illinois. An improved cream shampoo is covered comprising a mixture of (1) a water-soluble salt of a higher molecular weight fatty acid amide of sulfated monoethanolamine, and (2) a water-soluble salt of a higher molecular weight fatty acid amide of a sulfated hydroxy-alkyl primary amine in which there is at least one lower alkyl radical directly attached to the carbon atom to which the alcoholic hydroxyl is attached, the higher molecular weight fatty acid radicals of said amides containing from 8 to 18 carbon atoms, (2) being present in proportions of about one to one of (1) to about three to one of (1).

No. 2,592,535. Process of Dedusting Soap and the Resulting Products, patented by John W. Bodman, Winchester, Mass., assignor to Lever Brothers Company, Cambridge, Mass., a corporation of Maine. The patent describes a water-soluble soap product comprising finely divided spray-dried soap particles having on at least a portion of their surfaces a superficial coating of an alkali metal alkyl phosphate.

No. 2,594,453. Detergent Compositions, patented by Milton Kosmin and Jay C. Harris, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware. The patent covers a detergent composition comprising in parts by weight from 15 to 30 parts of the condensation product of tall oil with ethylene oxide, said condensation product containing at least 0.5 part, but less than 2.3 parts, of condensed ethylene oxide per part of tall oil, from 20 to 50 parts, anhydrous basis, of a sodium phosphate selected from the group consisting of trisodium phosphate, sodium tripolyphosphate, tetrasodium pyrophosphate and sodium hexametaphosphate and mixtures thereof, and from 20 to 40 parts, anhydrous basis, of a non-phosphate salt selected from the group consisting of soda ash, sodium sesquicarbonate, sodium sulfate and sodium borate and mixtures thereof and from 0.1 part to 5 parts of carboxymethylcellulose.

No. 2,592,226. Process for Improving the Color of Fats and Fatty Oils by Treatment with Chlorine Dioxide, patented by Eric R. Woodward, New York, N. Y., assignor to Mathieson Chemical Corporation. In the process for improving the color of fats and fatty oils in which the material to be bleached is treated by passing a mixture of chlorine dioxide and an inert diluent gas in contact therewith, the steps comprising flowing the material to be bleached as a stream of relatively small transverse area through an elongated, confining conduit injecting the mixture of chlorine dioxide and diluent gas into the flowing stream, and bleaching the material to the desired color by correlating the rate of flow of the material to be bleached with the injection of the chlorine dioxide mixture in a manner limiting the period of contact between the material to be bleached and the chlorine dioxide to a very short contact period in contrast to that of tank bleaching.

No. 2,587,957. Insect Repellents Containing a Chlorobutyroamide, patented by Oscar W. Bauer and John W. Teter, Chicago, Ill., assignors to Sinclair Refining Company, New York, N. Y., a corporation of Maine. Patented is an insect repelling sheet material comprising a sheet material impregnated with a chlorobutyroamide.

No. 2,585,027. Reconstruction of Glyceride Oils, patented by Herbert H. Mueller, Winchester, Mass., assignor to E. F. Drew & Co., Inc., New York, N. Y., a corporation of Delaware. A method of reconstructing glyceride oils is patented which comprises mixing a coconut type oil the fatty acid radicals of which have from 6 to 18 carbon atoms with a mixture of higher fatty acids having from 12 to 18 carbon atoms in excess of that necessary to displace the lower fatty acids of said oil, heating the mixture to a reaction temperature to displace a major portion of the lower fatty acids having 6 to 10 carbon atoms and to cause said higher fatty acids to enter into combination in said glyceride oil, removing the latter from the zone of reaction, thereafter introducing glycerine into the reaction product, and heating to cause esterfication of said glycerine with said product until the acid value is about 5-6%.

They discovered

Away back, when soap was made from a crude mixture of ashes, household waste fats and water, the problem was to know when the ash and water mixture was ready for saponification with the fats. They discovered that when an egg, dropped in the solution, *floated*, the time was right for blending.



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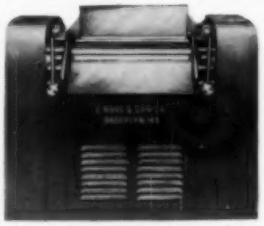
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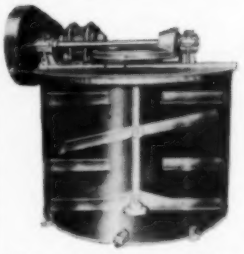
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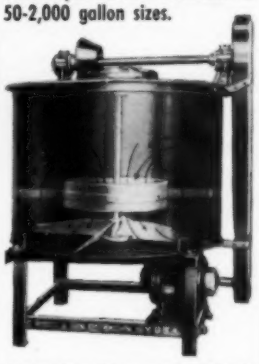
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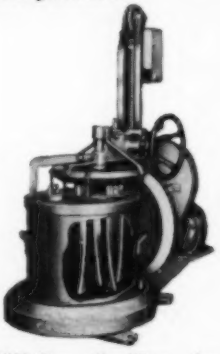
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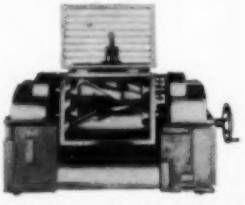
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SOAP PLANT *Observer*

By John W. McCutcheon

CONVENTIONS of the American Oil Chemists' Society always have something of interest to contribute to the soap industry, and the recent spring meeting at Houston, Texas, was no exception. Papers were presented on the materials of construction for glyceride and fatty acid plants, viscosity of liquid coconut oil soaps, carboxy methyl cellulose in synthetic detergent-soap mixtures, etc.

* * *

THE writer took the opportunity while in the South to visit a number of soap plants in Mexico. There seems to be considerable industrial growth taking place in Mexico and a number of branch factories of American firms were passed. Soap making capacity seems quite adequate for the population of 28 million and includes six continuous plants by Sharples.

Synthetic detergents were in evidence in all the larger stores visited and were confined chiefly to products of American origin. One of the smaller soap manufacturers stated that it was difficult to put an unknown brand on the market, from which it may be inferred that sales promotion in Mexico does not differ largely from that of the U. S. A. The general cost of living is probably about 80 per cent of that here, as judged by the writer's own expenses. A good meal for example will cost about 10 to 15 pesos, equivalent of $1.15-$1.65 American money. A laborer, however, receives only about 10 pesos per day which places him in miserable circumstances as compared with American standards. For this reason, only the better income class can afford the luxury of powdered soaps and synthetics. The vast majority of Mexicans still use filled bar soaps of about 30 to 40 per cent fat equivalent content, and in the back areas, washing was observed still being done by hand without the aid



of soap at all. Until just recently, glycerine was saleable at 50 cents per pound as an export item. Now, at 30 cents, its production is unattractive, particularly in view of the relatively high prices of fats. It is possible that soap production to some extent was stimulated by high prices of glycerine and may have to be reduced somewhat. The low wages of labor reflect decidedly on the capital cost of the plant. However, since fat costs are relatively high and since wages are not a large item in the manufacture of soap, it is concluded that soap products could not be substantially reduced in price by the introduction of more efficient methods of manufacture.

* * *

AT THIS time of the year, the consumer surveys start to come through. Two such reports received to date are the Grocery Store Distribution Survey of Beaumont, Texas, and the Sixth Consumer Analysis of the McClatchy Newspapers covering Sacramento, Fresno and Modesto in California Although these reports continue to be a valuable guide in buying trends, their importance as far as synthetics are concerned has somewhat diminished now that the pattern has been more or less set and usage has begun to level off. Heavy duty detergents continue to show an increase over light duty detergents. The overall average, however, for the area of the California report shows a slight decline as obtained by combining the six leading brands over a four-year period. The data follow:

	1949	1950	1951	1952
Syndet Usage...	17.3	18.3	19.1	18.4%

Probably a better overall picture of continued strong position of syndets is obtained from the recently released data of the Association of American Soap and Glycerine Producers, Inc. These data are shown in table below.

The AASGP figures indicate that over 42 per cent of total sales in the first quarter of this year are represented by syndets. The low ratio in 1951 of about 33 per cent very possibly reflects an abnormal usage of soap due to the Korean emergency, as mentioned in the Association report.

* * *

NOT long ago, mention was made in this column (January P. 83) that a revised list of synthetic detergents was being prepared similar to that appearing in the 1949 August, September and October issues of *Soap and Sanitary Chemicals*. This has just now been completed and will begin in the July issue. The co-operation of the producing companies has been phenomenal and we hope this list will be just as accurate or more so than the last. New products appear so fast, however, that no list can ever be considered complete in the strict sense of the word. With all the work involved we sometimes get a laugh or two from our work, such as that provided by the company who checked the proof and wrote—"please note that 'and' is spelled wrong in the eighth column!"

	1st Quarter, 1951	1st Quarter, 1952
Sales of Solid Soaps	683,066,000 lbs	478,811,000 lbs.
Sales of Synthetic Detergents	333,601,000 lbs.	354,064,000 lbs.
	1,016,667,000 lbs.	332,875,000 lbs.



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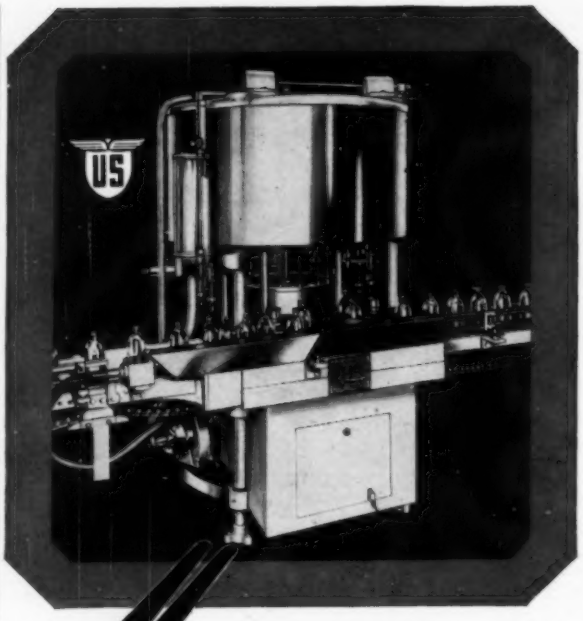
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ACS Monograph on Silicates

Soluble Silicates, Their Properties and Uses by the late Dr. James G. Vail, American Chemical Society Monograph, Reinhold Publishing Corp., New York. Volume I, price $8.00. The author was a director, and a former vice-president of Philadelphia Quartz Co., Philadelphia.

This volume, not a revision of the previous ACS monograph on the subject, but an entirely new work, is concerned with the chemical and physical properties of soluble silicate. The second volume, expected to appear in mid-summer, will deal with industrial applications.

Volume I is divided into five chapters, the first reviewing the history of investigations. Chapter II, "Present Practices," deals with manufacturing processes. Commercial forms of silicates are reviewed and it is pointed out that 29 liquid silicates are regularly made. There is a discussion on methods of analysis. Chapter III, on the "homogeneous systems" deals with simple noncrystalline silicates. Chapter IV on the heterogeneous systems discusses the phase equilibria of anhydrous and of the hydrous systems, and covers silicates of potassium, rubidium, lithium, ammonium, and sodium. Chapter V deals with the complex silicate systems. Mechanism of aggregation in the formation of sols and gels is discussed. Detergency and dispersion are subjects of detailed consideration.

German Soap Annual

Seifen-Industrie-Kalender edited by Dr. Hans Heller, 1951. Published by Delius, Klosing & Co., Berlin, Germany, price DM 7.69 (approximately $1.75).

This 55th edition of the *Kalender* (Annual) contains, apart from the usual buyer's guide and trade lists, a large number of extensive tables supplying pertinent information including one showing characteristics of 37 commercial oils and fats.

Among several short articles, one deals with additives to washing materials to prevent deterioration of the fiber, particularly by oxidation, and another with the use of phosphates in washing materials. Two are concerned with current economics of the soap trade in Germany. According to one of these there are about 400 soap plants in Western Germany and West-Berlin. Per capita consumption of soap per month, which was 230 grams before the war, was 150 grams in 1950, and rose to 190 grams in 1951. This compares with 800 grams in the U. S.

3-Aminopropanol Available

The availability of 3-Aminopropanol in trial lots for evaluation for use in synthesis of soaps and other surface active agents, was announced recently by American Cyanamid Co., New York. Chemical properties of 3-aminopropanol are similar to those of other amino alcohols having primary amino and hydroxy 1 groups. However, the three-carbon separation between the two groups results in behavior more typical of the individual groups than in currently available alcohols.

Cyanamid's new product bulletin No. 25, concerned with the new amino alcohol, is available on request.

Acetaldehyde Safety Data

Chemical Safety Data Sheet SD-43, covering acetaldehyde, was issued recently by the Manufacturing Chemists Association, Woodward Building, 15 and H Streets, Washington 5, D.C., and is available at 30 cents per copy. Summarized are the physical and chemical properties of acetaldehyde; its hazards and recommended precautionary measures.

New Safety Air Press

An air type soap press, which for greater safety requires the operator to use both hands at the same time to operate the air controls was recently announced by Houchin Machinery Co., Hawthorne, N. J. The dual control levers, one at each side of the press, must be held down simultaneously or the ram will not function. Important, too, is the fact that the operator can be seated at the machine since there is nothing for his feet to do. Pressures are quickly adjustable up to 2,500 pounds surface pressure.

New "E.G. Universal" Filler

A new "EG Universal" filler, was announced recently by Stokes & Smith Co., Philadelphia, which features mechanical parts located above filling station to help keep all parts free from dust and dirt and reduce cleaning maintenance. The new filler is adaptable for rotary and in-line conveyor filling, and its adjustable table permits filling by pack, weight or volume using a minimum number of augers. Auger speeds are adjustable from 500 to 1000 rpm. The filler can be pre-timed to pace the operator, and also features a simplified control panel for finger-tip changeover and a micrometer adjustment. Details available upon request.

Steel Storage Racks

Barrett-Cravens Co., Chicago, recently published bulletin 5221, illustrating and describing the firm's line of steel storage racks for drums, barrels, crates, bins, skids, and pallets. These applications are shown with installation views.

Barrel racks include selective drain racks which permit removal of the contents of a barrel or drum without removing it from the rack. Barrett skid and pallet racks are also adapted to storing crates, cartons, and odd shapes.

Cleaning Encyclopedia

How to Clean Everything, an Encyclopedia of What to Use and How to Use It, by Alma Chestnut Moore, was published recently by Simon & Schuster, New York. Price $3.00.

New Oleic Acid

(*From Page 95*)

potash soaps made with "Emersol 240" are light in color (pale yellow), practically odorless, and extremely stable, according to the manufacturer. The bulletin includes charts illustrating oxidation stability in comparison with other Emery oleic acids, and the solubility of potash and soda soaps. Copies available on request.

Production Clinic

(*From Page 93*)

ers. A 32-page booklet is available upon written request.

Anti-Foaming Agent

DOW-CORNING "Antifoam A," now available from Dow-Corning Co., Midland, Mich. is being used extensively. As little as 0.03 part per million prevents foaming in certain processing operations. This material is odorless, tasteless and is practically inert physiologically. It is claimed to be both efficient and economical to use.

Filter Fabrics

TURNER HALSEY CO., New York, selling agents for Mt. Vernon-Woodbury Mills, are stressing the uniformity of their filter fabrics, obtained by laboratory controls. A special testing unit that automatically tests six strands of yarn at a time is used to assure this uniformtiy.

Rubber Base Paints

HERCULES POWDER CO., Wilmington, Del., is offering "Parlon" rubber base paints to check corrosion from acids or alkalies. These paints are very satisfactorily used by many industries. They may be applied to metal surfaces, resist corrosion over a long period, dry quickly, and are not affected by temperature changes.

—— ♦ ——

New Wrapping Machine

A new wrapping machine has recently been developed by R. W. Barraclough, Ltd., Southport, England. Though primarily designed for wrapping household soap, it is said to be suitable for any square or rectangular object. It operates at a speed of 120 wrappings a minute. The paper is fed from a reel. The paper cut off is controlled by an electronic unit impulsed through a photo-electric cell focusing on pre-printed spots on the reel. This method enables the machine to operate in hot climates. It features a constantly rotating cutting knife, which is completely sheathed during all operating time other than at the split second necessary for the knife to sever the paper. The machine wraps four, six or eight ounce cakes, and incorporates a corner-tucking-in device. It features easy accessibility, quick adjustment and interchange of parts for various sizes, ready cleaning, etc. Completely automatic lubrication insures minimum maintenance while the machine is in service.

—— ♦ ——

Solvent for Ships

U. S. Coast Guard Certificate No. 340 has been granted to cover safety solvent "FO-128" which is made by Fine Organics, Inc., Aviation-Industrial Chemicals Division, New York. This certificate No. 340 declares the solvent fit for use as an article of stores on board vessels, but covers only hazard in the use of this product. "FO-128" is a liquid solvent of low toxicity, designed to replace carbon tetrachloride as a cleaning agent for electric motors and equipment. Its flash point is 140°F. It is available in five and 53 gallon drums.

—— ♦ ——

Bergamot Supply Reviewed

A recent issue of *D & O News*, external house organ of Dodge & Olcott, Inc., New York, features an article reviewing the bergamot situation. It outlines the historical and current facts concerning this oil, which is extremely short. There is no immediate relief in sight according to this article, which also describes "Bergamot Synthetic D & O".

Dairy Detergent Pamphlet

A new powdered acid cleaner for dairy plants is discussed in an eight-page folder recently issued by Diamond Alkali Co., Cleveland. It supplies directions for cleaning various types of milk-processing equipment with Diamond's inhibited acid detergent by circulation, spray and manual methods.

—— ♦ ——

Permutit Water Data Book

An enlarged and revised edition of its Water Conditioning Data Book was published recently by Permutit Co., New York. The book supersedes an earlier edition, published in 1949. It consists of a compilation of 77 tables supplying data valuable to the engineer and anyone who is concerned with water conditioning problems. The 5 x 7¼ inch book contains 116 pages, and is bound in leatherette.

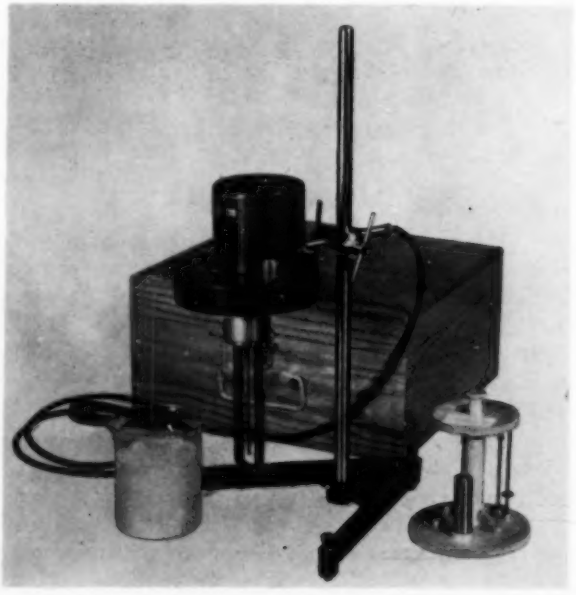
Boiling Vocabulary

(*From Page 51*)

TWITCHELLIZING — The splitting of fats by the use of Twitchell's process which makes use of a complex sulfonic acid as the catalyst.

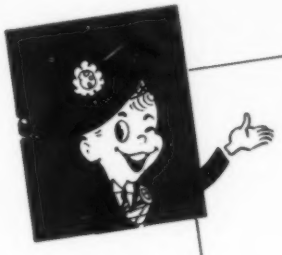
WASH—An operation primarily intended to remove glycerine from the system.

WATER LUMPS — Lumps of gummy soap caused by adding water more quickly than it can be accommodated.



New viscometer made by Brookfield Engineering Laboratories, Inc., Stoughton, Mass., for determining viscosity of liquids. The instrument gives readings in centipoises and is claimed to be accurate for viscosities of from minus one up to 32,000,000 centipoises.

Sanitary Section



"Here's a PROFIT-Making TIP you can't afford to pass"

Says Scotty Klenz-Aire

You can make a FINISHED DEODORANT SPRAY

for only 75¢ a gallon

with KLENZ-AIRE DEODORANT OIL

IT'S AMAZING! IT'S ALMOST TOO GOOD TO BE TRUE!

Klenz-Aire Deodorant Oil—*which we firmly believe is the finest, most economical Deodorant Oil you could buy*—combines with formaldehyde and water to make a milky emulsion spray that . . .

- **will not break down or separate**
- **costs only 75¢ a gallon** ***(for the finished spray)***

This wonderfully effective spray kills all tobacco smells, cooking odors, destroys odors in public rooms, theatres, kitchens, apartment houses, rest rooms, schools, hospitals, taverns . . . and leaves a pleasant, fresh after-scent that people like!

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WHATEVER THE AEROSOL PRODUCT— "FREON" PROPELLENTS MEET YOUR NEEDS



PRODUCT:
RUG SHAMPOO

Aerosol type:
foam product

Active ingredients:
Soap and/or detergent base —85 to 90% of formulation.

Pressure:
approx. 40 p.s.i.g.

Propellent:
40%—"Freon-12"
60%—"Freon-114"

21 different "FREON" propellents show versatility of these products

In 1951 three different propellents were supplied for foam products alone, as well as 18 others for a variety of aerosol products. Each product to be pressure-packed needs its own specific formulation. That's why the versatility of "Freon" propellents is important to the aerosol manufacturer. Whatever the aerosol product—a rug shampoo, room deodorant, personal deodorant, cosmetic, shave cream or lotion —there's a "Freon" propellent that's tailor-made for it.

Propellents for rug shampoos, for example, should furnish desirable foam characteristics for easy and efficient cleaning. The correct propellent pressure and composition are obtained with the "Freon" propellents indicated in the sample specifications above. The use of "Freon-114" also assures exceptional stability of the formulation.

OUTSTANDING ADVANTAGES OF "FREON" PROPELLENTS

1. Nonflammable, nonexplosive
2. Virtually nontoxic
3. Noncorrosive
4. Stable and of uniform quality
5. Available in wide range of pressures
6. Good solvent properties
7. Applicable to all types of aerosols

For full information on the properties of "Freon" propellents and their use in every type of aerosol—space spray, surface-coating spray and foam product—write: E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Del.

Be sure to visit the Du Pont Suite at the CSMA Convention, Sheraton Plaza, Boston, Mass., June 8, 9, 10, 1952

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150th Anniversary

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SAFE PROPELLENTS

"Freon" is Du Pont's registered trade-mark for its fluorinated hydrocarbon propellents



A report to the industry on Allethrin

Two years of Allethrin formulating
What Allethrin has done
What Allethrin is doing—
What Allethrin can do

In supplying and formulating over 90% of the Allethrin used by industry to date, McLaughlin Gormley King Company discovered how to take full advantage of its remarkable characteristics.

The Allethrin produced since full scale production began more than one year ago is equivalent to approximately half of the high content pyrethrum imported during the same period. Such a consumption demonstrates conclusively its effectiveness when skillfully used.

For proof of the effectiveness of MGK Allethrin formulations, note that over 12,000,000 allethrin aerosol bombs have been sold, and millions more are now being produced.

MGK's special "Booster" concentrates for flies are guaranteed to make *Grade AA* sprays. MGK's patented synergist "264", for example, makes Allethrin remarkably effective against roaches.

For information on what MGK Allethrin formulations can do for you, see the following pages—and write to MGK for details on your specific requirements.

Turn the pages to learn
what **MGK** Allethrin formulations
can do for you ——————→

McLAUGHLIN GORMLEY KING COMPANY

MINNEAPOLIS, MINNESOTA



Make an extra 3¢ on every Aerosol bomb

You can shave up to 3¢ from the ingredient cost of every aerosol bomb you turn out this year—by using MGK Allethrin formulations!

Allethrin's high knockdown and killing power is like that of pyrethrum, yet the cost is substantially lower. MGK Allethrin is in plentiful supply, is produced in commercial quantities from raw materials originating within the country, is free from toxicological and solubility problems.

The exact amount of your profit increase will depend on the formulation you choose. You can substitute MGK Allethrin for all or part of the pyrethrum. MGK's patented synergist "264" works equally well with both active principles.

MGK offers complete formulations, ready for packaging—intermediate formulations with toxicants and synergists—or the purest toxicants on the market. Write now for details.

Use MGK Allethrin Formulations

McLAUGHLIN GORMLEY KING COMPANY

MINNEAPOLIS, MINNESOTA



Cut ingredient costs 11¢ on each gallon of spray

Now you can cut ingredient costs on your sprays by as much as 11¢ a gallon, with MGK Allethrin concentrates.

Special low-cost "Booster" concentrates have been thoroughly tested by independent laboratories and used in practice by experienced pest control operators for two years. MGK "Booster" concentrates "X" and "Y" make *Grade AA* fly sprays of superior quality which are toxicologically safe.

MGK "Booster" concentrate "Z" makes roach sprays which have superior killing power and are practically odorless. These sprays are designed for use in food preparation plants, factories, warehouses and homes.

For cattle sprays, MGK Allethrin is ideal for it provides high knockdown and kill and meets all safety requirements for use in dairies.

Plan to take full advantage of MGK's skill and knowledge in using Allethrin . . . write now for data on formulations.

Use MGK Allethrin Formulations

McLAUGHLIN GORMLEY KING COMPANY

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"Go the scientific way with MGK"

Pioneers in the processing of pyrethrins and suppliers of over 90% of the Allethrin used by industry to date, MGK is in a unique position. Having more commercial experience with Allethrin and Pyrethrum than any other firm in the world, MGK is equipped to produce formulations utilizing *all* the advantages of *both*. This experience and knowledge is made available to you through the MGK "Scientific Way" which includes the pre-testing of basic ingredients, synergists and formulas. The result is better products—and larger profits—for you as a manufacturer.

Whether your production set-up calls for formulations ready to package, partly-completed formulations or pure toxicants, MGK quality and MGK "know-how" will be of value. Write for help on any problem involving the manufacture, packaging or merchandising of insecticides.

Use MGK Formulations

FOUNDED 50TH Anniversary 1902

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RIGID ★ REVERSIBLE ★ PLASTIC
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✓ Crown's POR-RITE SPOUT *hooks on* to opening into which contents are poured . . . extends to edge of its container to *eliminate container interference.*

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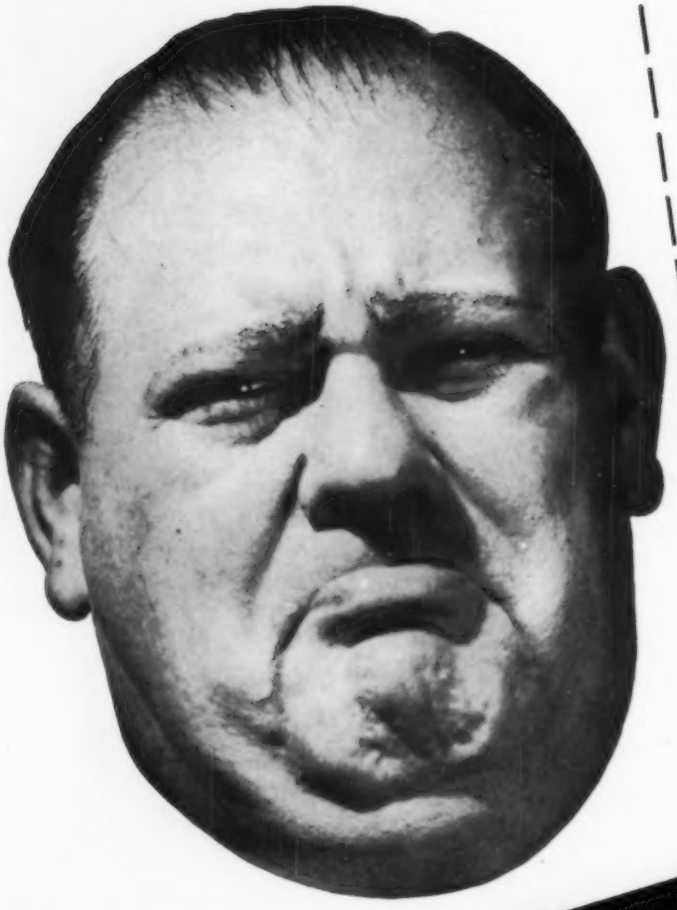
✓ Crown's POR-RITE SPOUT provides *dual purpose* pail or drum-type container with *controlled pouring* assured.

✓ Crown's POR-RITE SPOUT is *rustproof* . . . available in *various colors* to designate different products.

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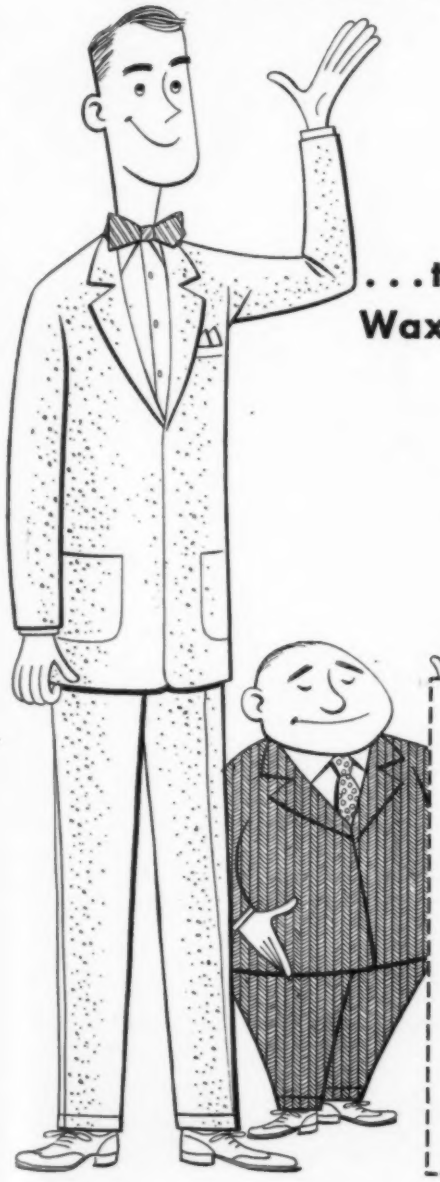
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14 Leather Finishes and Dressings
15 Leather Packing
16 Lubricant for Ironers and Presses
17 Lubricant for Thread and Cord
18 Matches
19 Mold Lubrication
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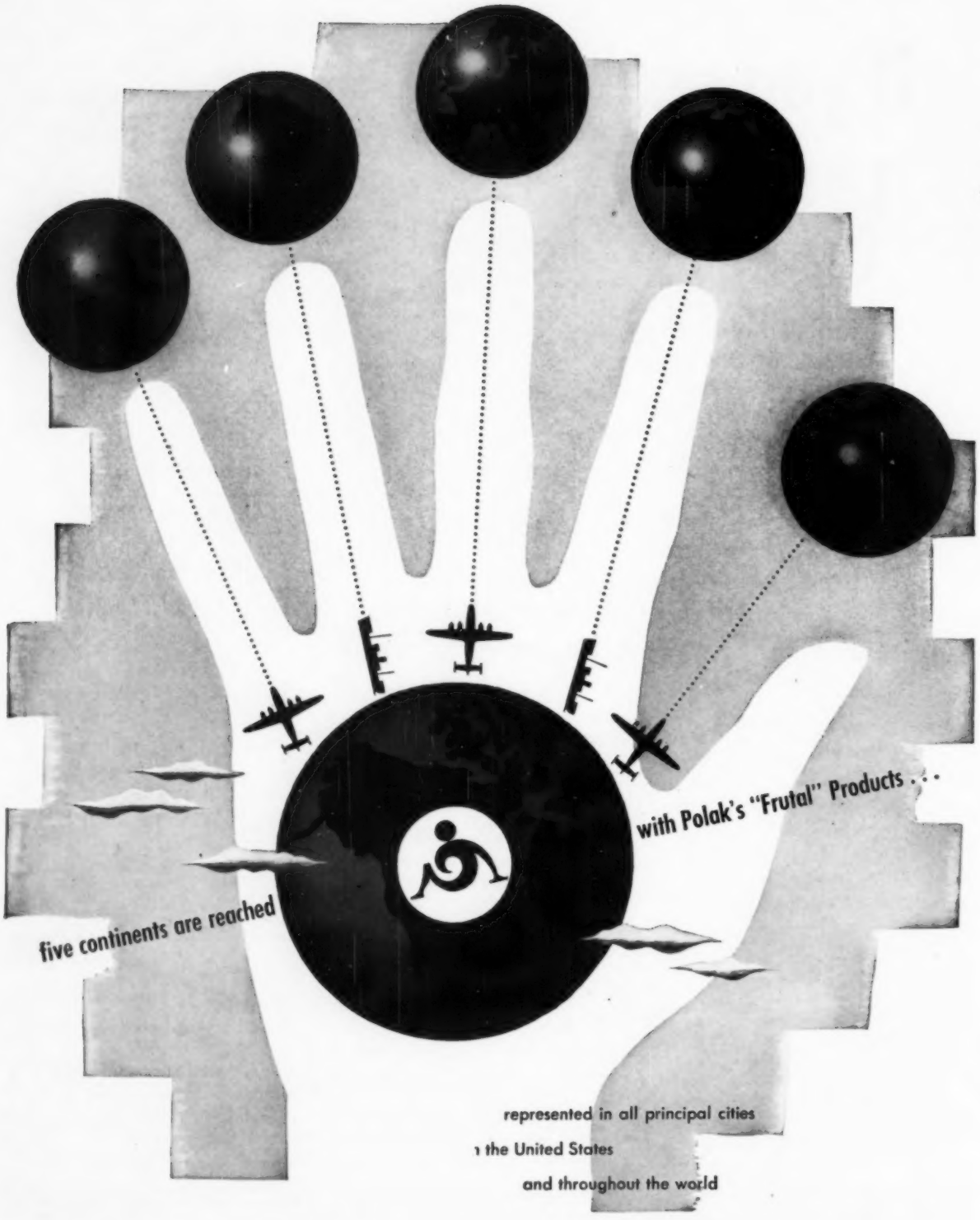
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Enlarged Cross-Section View showing Safety-Seal construction of Dill "Aerosol" Valve

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DILL AEROSOL VALVES

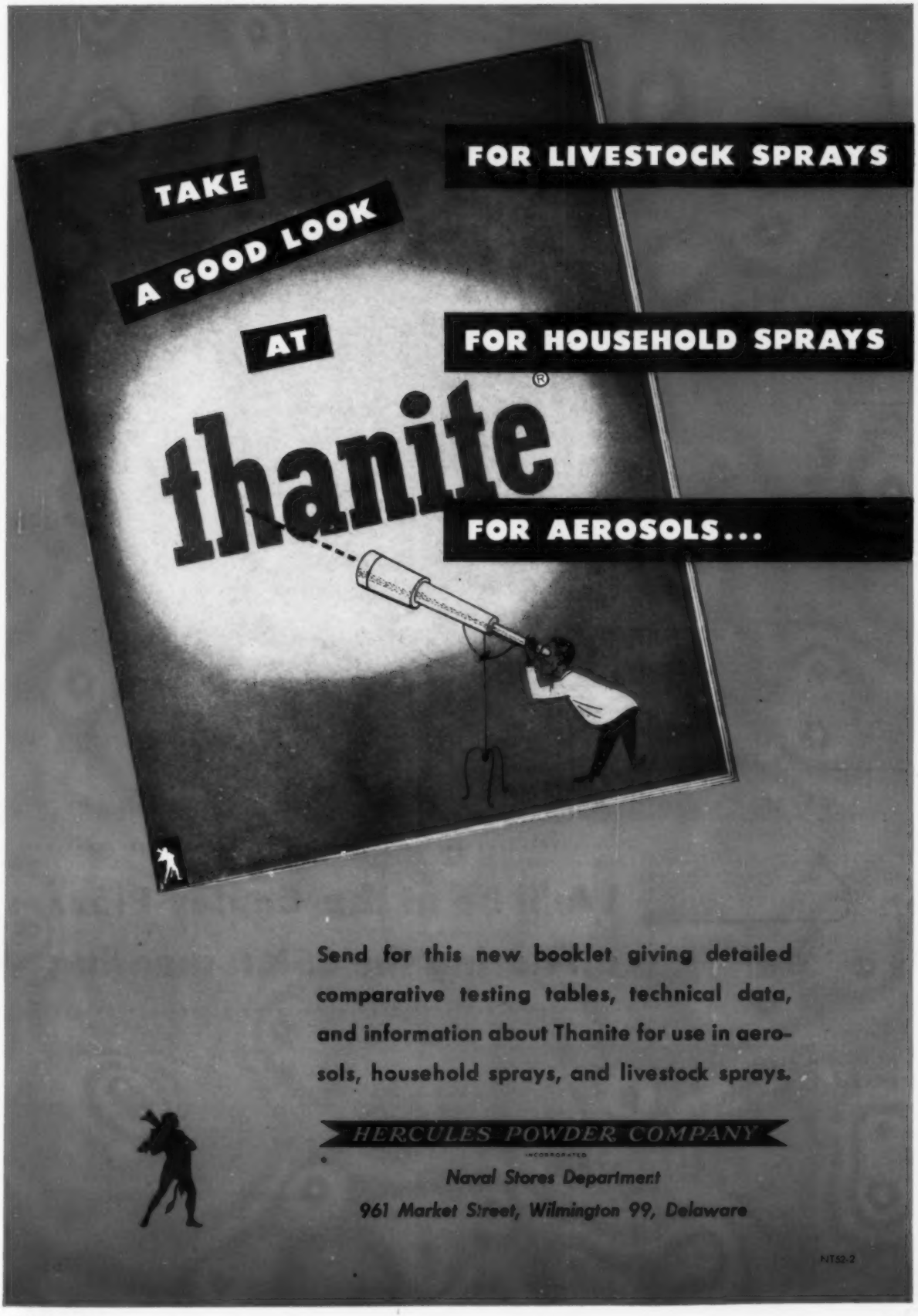


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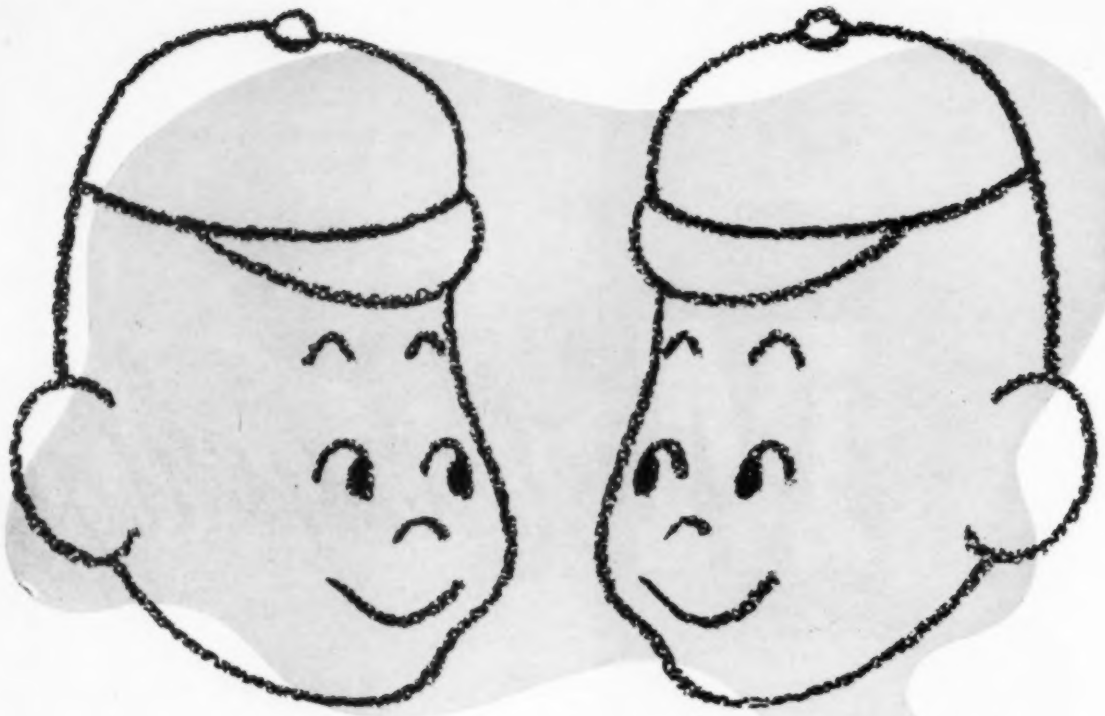
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A PRACTICAL 435 page book concerned primarily with the detergent compounds, defining the various types of synthetics as to class, manufacture, application and processing. In addition to a thorough analysis of the manufacturing processes involved, a discussion of source and preparation of raw materials, the author presents also an adequate theoretical background on the fundamentals of surface activity and the relation of surface activity to detergency, emulsification, foaming, wetting and dispersion.

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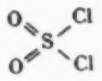
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Hooker Chemical Guide
(ONE OF A SERIES)

USE this handy reference to save time in selecting high quality chemicals.

HOOKER
ACID CHLORIDES

SULFURYL CHLORIDE



Synonym: Sulfuric Oxychloride
Formula: SO_2Cl_2
Appearance: Light yellow liquid

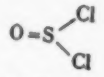
TYPICAL PROPERTIES

Molecular Weight	135.0
Pour Point	below −54°C
Distillation Range	2° incl. 69.5°C
Specific Gravity, 15.5°/15.5°C	1.680
SO_2Cl_2 Content	99% Min.

USES

Chlorinating Agent: In the production of chlorophenol, chlorothymol, pharmaceuticals, dyestuffs; reacts with organic acids to form chlorides and anhydrides.

THIONYL CHLORIDE



Synonym: Sulfurous Oxychloride
Formula: $SOCl_2$
Appearance: Clear, pale yellow to red liquid

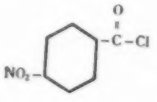
TYPICAL PROPERTIES

Molecular Weight	119.0
Pour Point	−75°C
Distillation Range	75° to 78°C
Specific Gravity, 15.5°/15.5° C	1.640
$SOCl_2$ Content	97.5% Min.

USES

Chlorinating Agent: To replace various groups with chlorine. Among end products are: isoamyl chloride, synthetic pyrethrum, phenyl propyl chloride and synthetic Vitamin A palamitate, antihistamines.

PARANITROBENZOYL CHLORIDE



Formula: $NO_2C_6H_4CO\,Cl$
Appearance: Yellow crystalline lumps or flakes

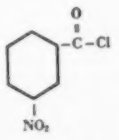
TYPICAL PROPERTIES

Molecular Weight	185.5
p-Nitrobenzoyl Chloride	97%
Melting Point	70.5°C
Distillation Range at 105 mm	202° to 205°C

USES

End Products: Procaine, dyestuffs

METANITROBENZOYL CHLORIDE



Formula: $C_6H_4NO_2CO\,Cl$
Appearance: Yellow to brown liquid, partially crystallized

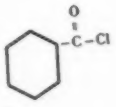
TYPICAL PROPERTIES

Molecular Weight	185.5
Last Crystal Point	28° to 31°C
Distillation Range	275° to 278°C

USES

End Products: Dyestuffs for fabrics and color photography; pharmaceuticals.

BENZOYL CHLORIDE



Formula: $C_6H_5CO\,Cl$
Appearance: Clear, colorless to light yellow liquid

TYPICAL PROPERTIES

Molecular Weight	140.5
Freezing Point	−0.9°C
Boiling Point	197.3
Specific Gravity, 15.5°/15.5°C	1.219
Benzoyl Chloride	99%

USES

End Products: Intermediates, dyes, perfume bases, pharmaceuticals, polymerization catalysts, flour bleaching agents, plasticizers, resins, etc.

Specific Compounds: Benzyl benzoate, benzoyl peroxide, benzophenone and others.

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The fly died...and a new "jet" container was a success!



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Canco's new "jet" can embodies the experience and know-how of more than 50 years in the making of containers for specific purposes. Strong, conveniently shaped, with a variety of nozzles for every use, this container is not only one of the most efficient for insecticides, but is adaptable to a wide variety of other uses. Among them:

Shampoos, shaving creams, whipped cream, deodorants, waxes, paints, mothproofers and many others.

Have you considered it for *your* product? Canco offers a wide variety of pressure containers for all industry. We will custom design a particular "jet" package to give your product unique shelf-distinction and eye-appeal.

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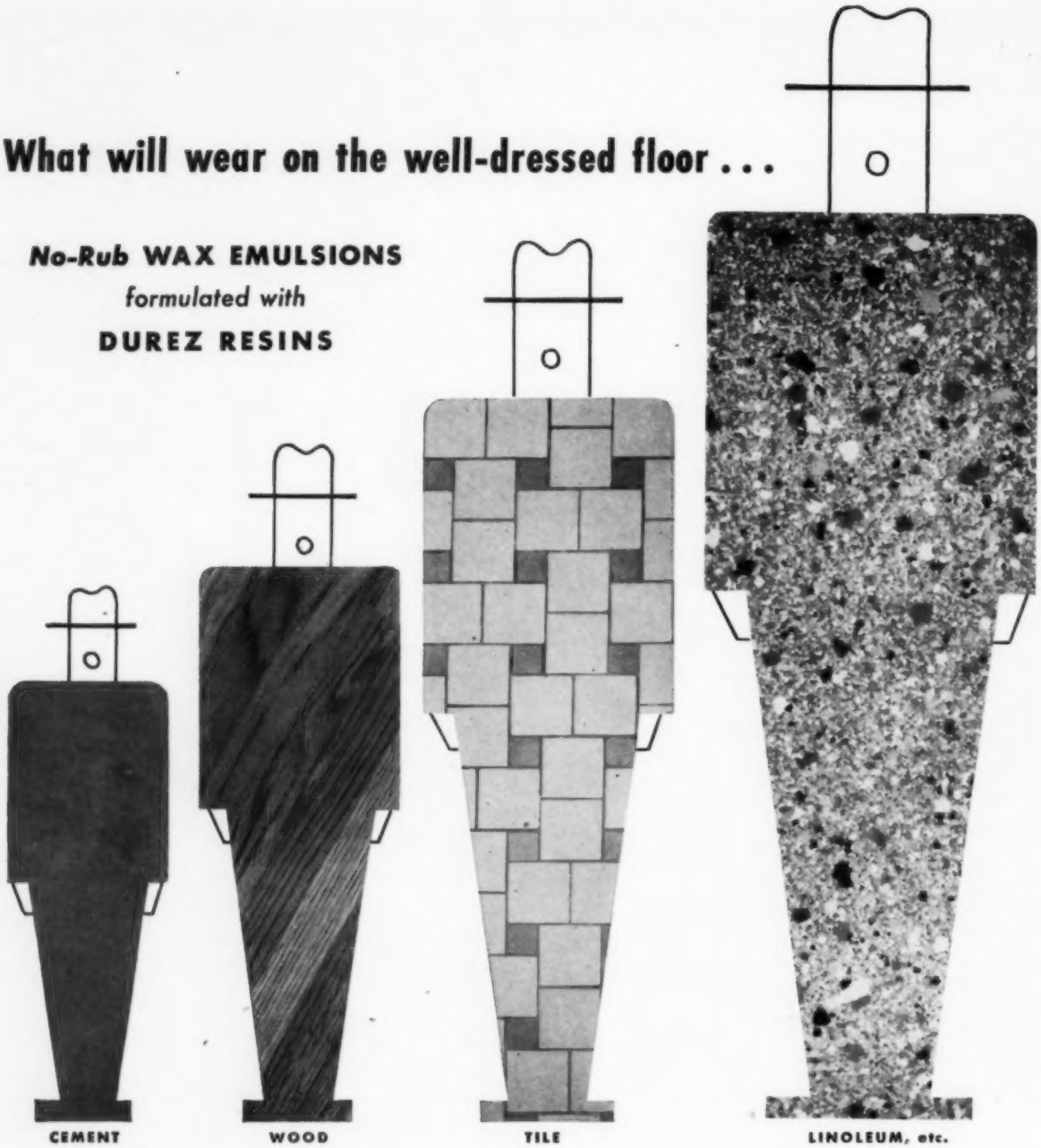
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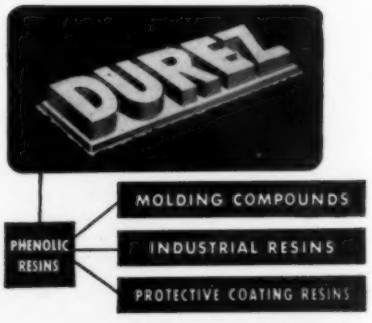
blend with wax in steam-jacketed kettles

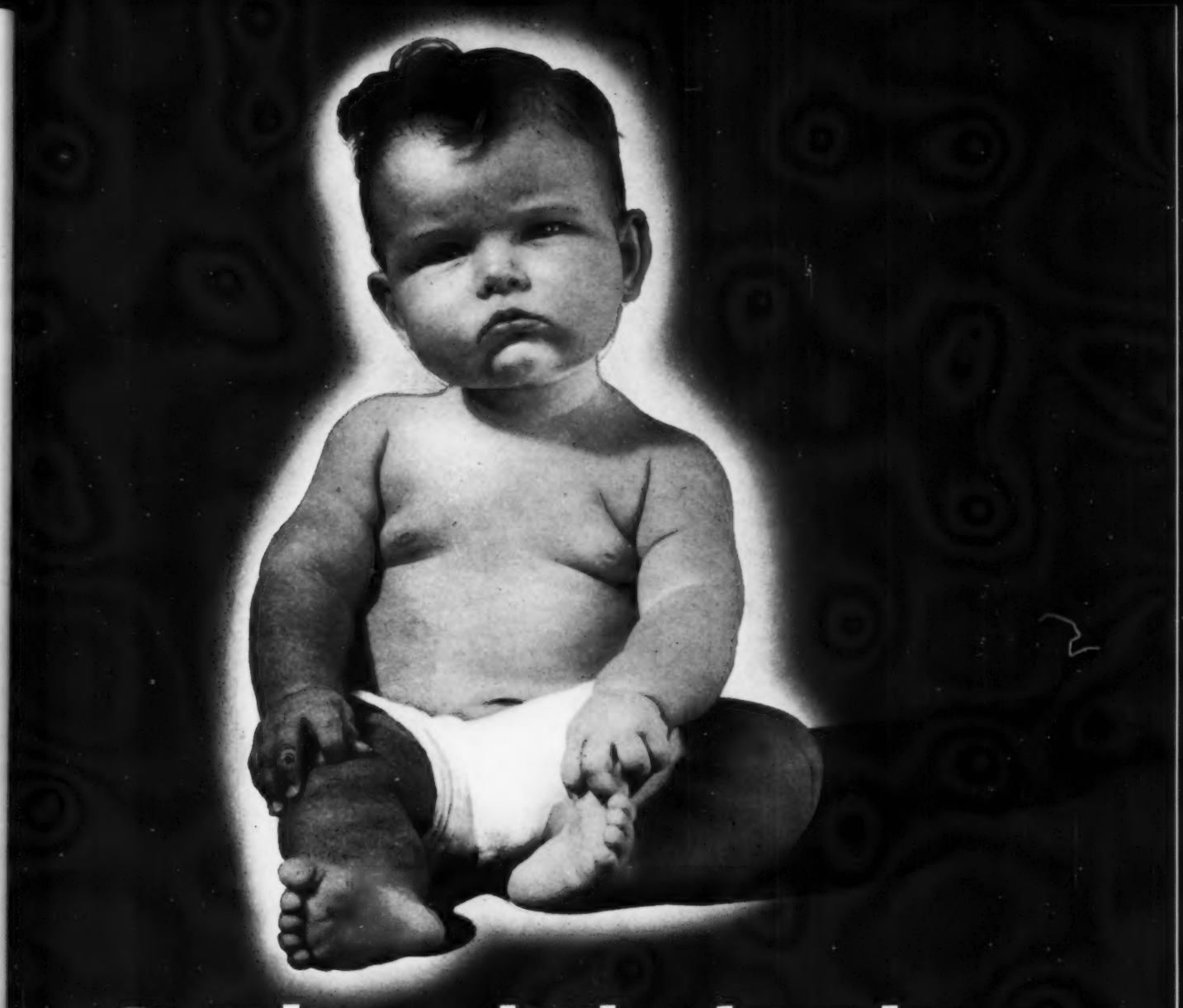
● Tick off on your fingers the most wanted properties in floor waxes and you'll see why prominent manufacturers favor Durez terpene phenolic resins . . .

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SHELF PROPERTIES ECONOMY

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to produce a perfume ideally suited to insecticides, air fresheners and detergents.

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Liquid Castile Soap Shampoo
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(50% Olive Oil Base)
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Liquid Toilet
40%, 30%, 20% Coconut Oil
Potash Vegetable Oil
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30 years in business and one of America's leading manufacturers of soaps ONLY is a testimonial to the standard quality of our products.

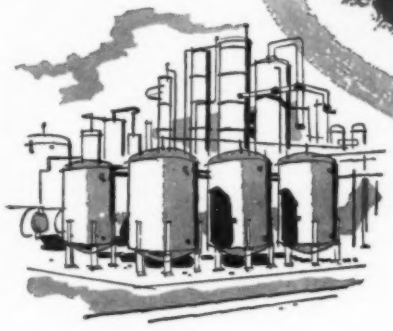
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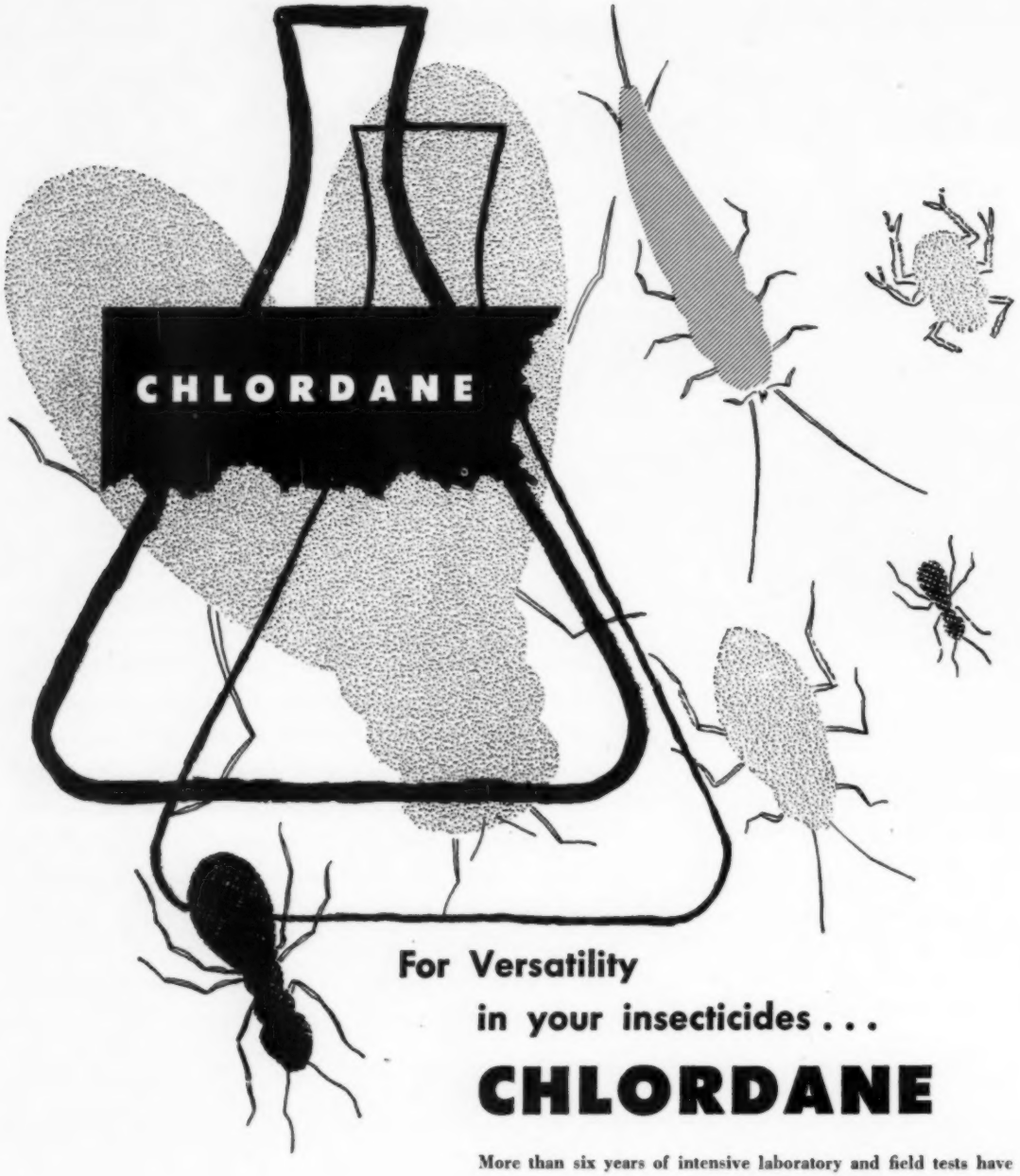
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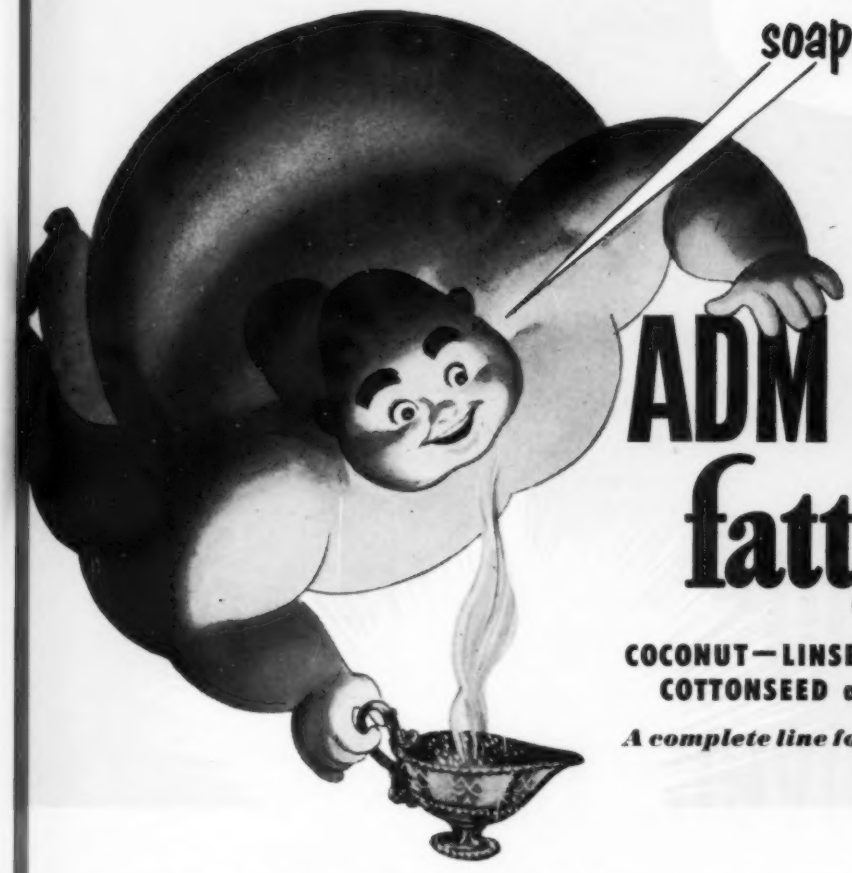
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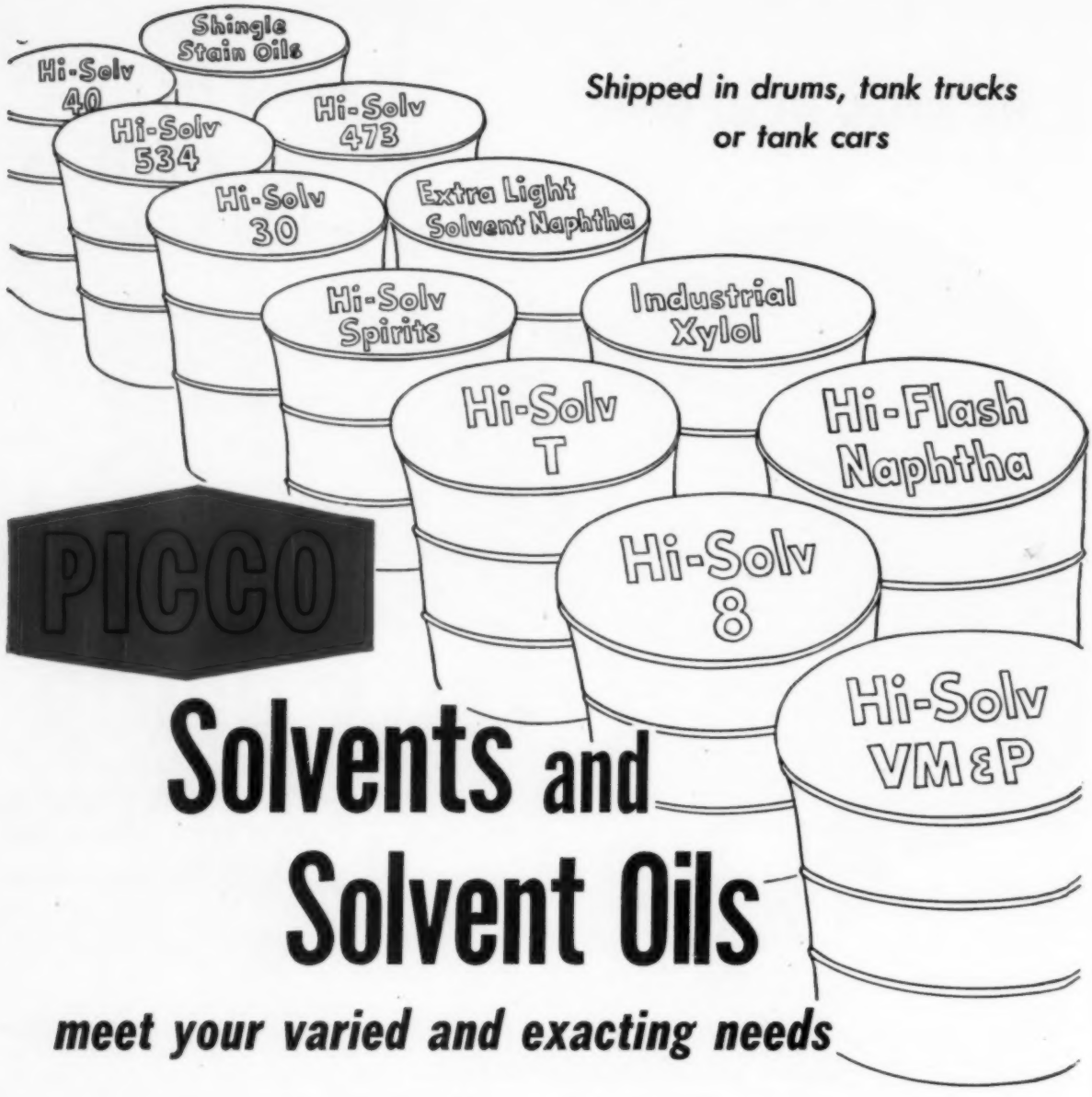
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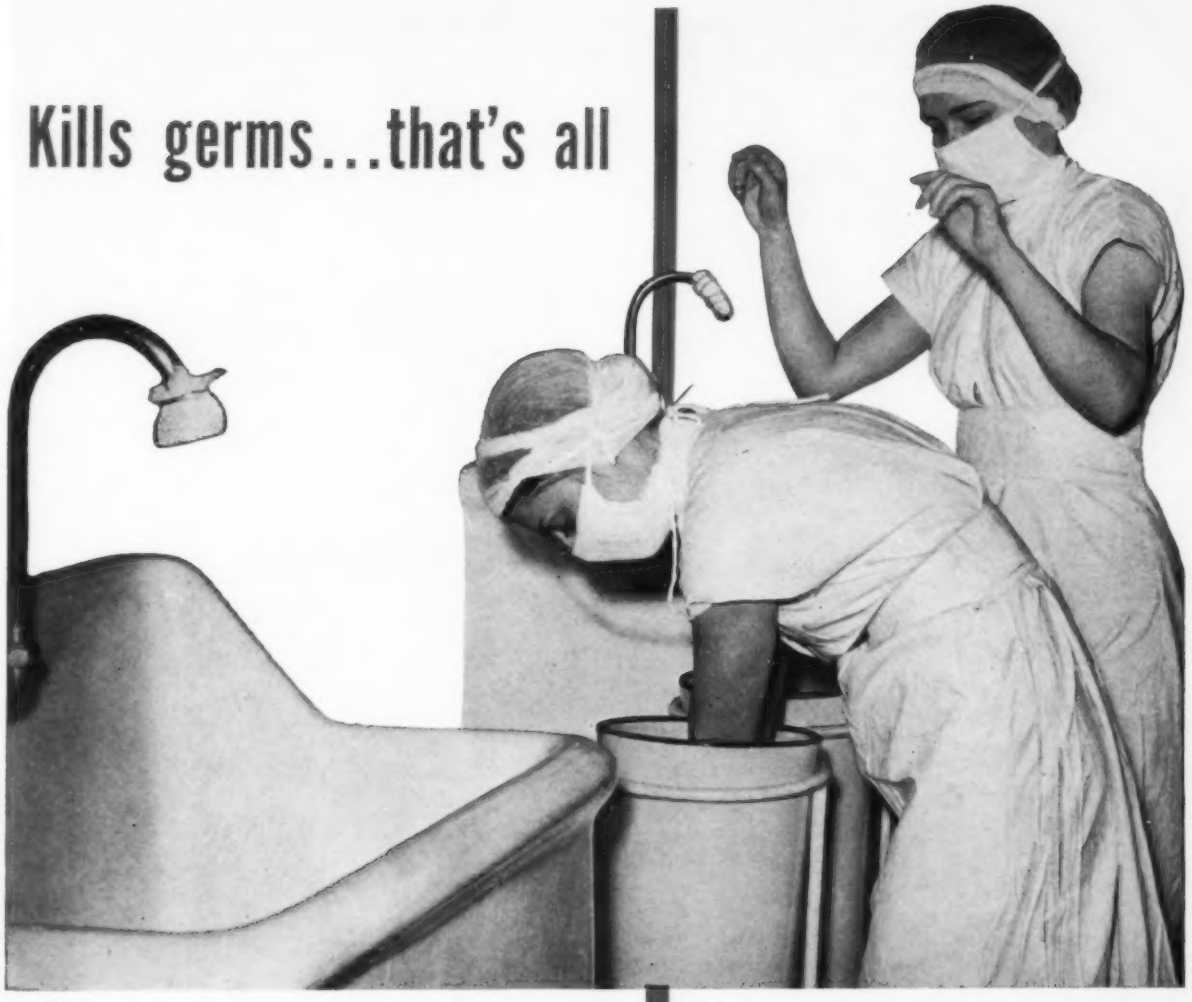
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Plants at: Clairton, Pa.; West Elizabeth, Pa.; and Chester, Pa.

Kills germs...that's all



With Monsanto Santophen 1, you can formulate a liquid soap or cleaning compound that is fatal to germs, but is *safe* for human beings and pets. Industry, hospitals and homes are in need of such cleansers. Supplying the need builds your sales volume.

Santophen 1 (ortho-benzyl-para-chlorophenol) offers you these qualities:

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5 It is easy to handle, light in color, nonstaining in solutions, with faint, nonpersistent odor.

If you are thinking of a germ-killing liquid soap, rug cleaner or cleanser for the future, investigate Santophen 1. Contact the nearest Monsanto Sales Office or write for a copy of Monsanto Technical Bulletin No. O-51, "*Santophen 1 for Use in Disinfectants.*" MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 1700 South Second Street, St. Louis 4, Missouri.

Santophen: Reg. U. S. Pat. Off.

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To give you the maximum of these important requirements ACME developed COLD-PRO 90. Produced by our exclusive cold process of bleaching, this grade offers the highest gloss and hardest film . . . at a real saving in cost. No wonder COLD-PRO 90 is the most popular shellac in the wax field today. ACME SHELLAC PRODUCTS CO., 105 Blanchard St., Newark 5, N. J.

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- freezing will not impair gloss more than 10%.
- available in any size containers to the trade only — or under your own label.
- send for full information on this revolutionary water emulsion wax.

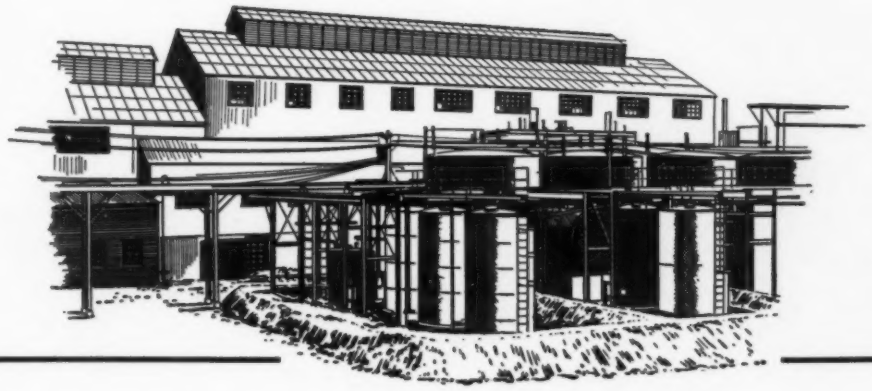
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Allethrin is *not* a synthetic pyrethrum, but it is a valuable supplement to and substitute for pyrethrum in many fields — IF properly used and IF freely available at an economical cost.

The ifs are now being removed! With the opening of the new U.S.I. allethrin plant, which will soon be in full production, the insecticide industry will have a large-scale commercial source of supply.

Aerosol manufacturers, in particular, can look forward to the 1953 season with the expectation that they can build aerosol formulations at reasonable cost that will kill even resistant flies — without annoying the customers.

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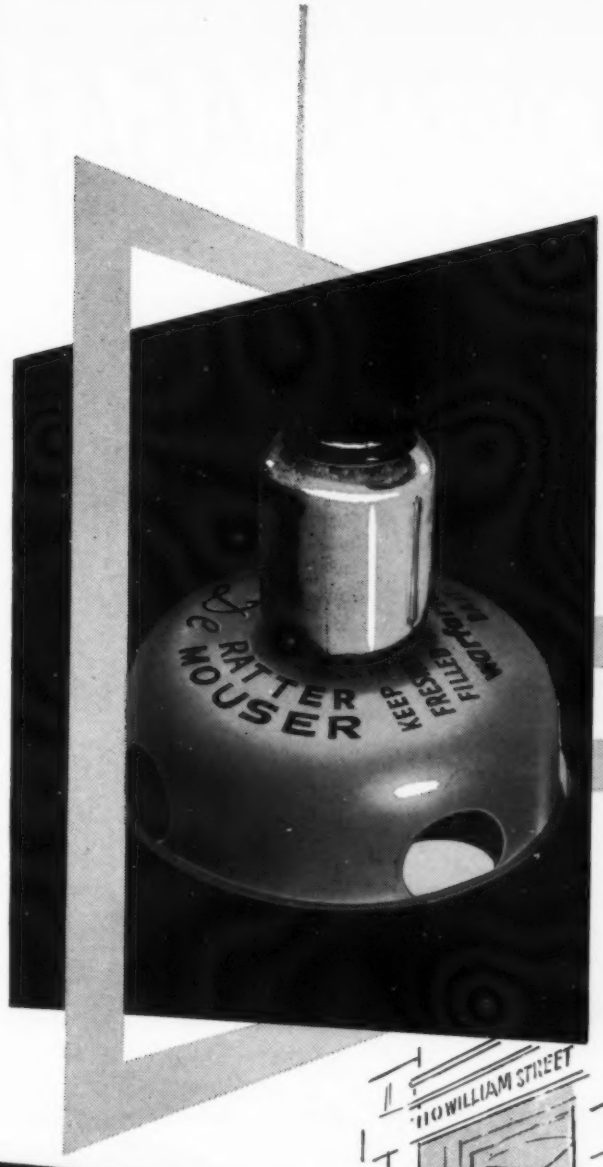
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are definitely "Repeat Sales"

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BARNS	HOMES	VAULTS	DAIRIES	FACTORIES	HATCHERIES
CAMPS	HOTELS	STABLES	THEATERS	WAREHOUSES	RESTAURANTS

WHETHER THE PROBLEM IS:

ANTS	SPIDERS	HOUSEFLIES	ROACHES	GNATS
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Insecticides, as created and compounded by Baird and McGuire, Inc., *MAKE THE KILL* both efficiently and economically. Our insecticides are government registered for nationwide shipping and may be shipped under your own label or with Baird's "Certified Seal." We will be pleased to send full information upon request. Ask for:

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OUR 43rd YEAR OF SERVICE TO THE INDUSTRY

C. S. M. A. Meeting in Boston

FORMATION of a new division, covering automotive chemical specialties, election of administrative committees for the six divisions comprising the association and a program of more than 60 papers, as well as panel discussions, highlight the 38th midyear meeting of the Chemical Specialties Manufacturers Assn., being held at the Sheraton Plaza Hotel, Boston, June 9 and 10. A large turnout is anticipated for the meeting, first to be held in Boston in many years, and registration is expected to top 600.

Although the meeting officially opens Monday, June 9, with concurrent sessions of the five divisions: Aerosol; Insecticide; Soaps, Detergents and Sanitary Chemicals; Disinfectants and Sanitizers, and Waxes and Floor Finishes, there were to have been meetings of approximately 35 committees and the board of governors on Sunday, June 8.

Following divisional meetings Monday morning, June 9, a group luncheon in the grand ballroom opens the general session of Monday afternoon. Features of the general session is a talk on the role of the "Business Man in Government" by Francis J. Curtis, vice-president of Monsanto Chemical Co., St. Louis, as well as the address of C.S.M.A. president, C. L. Weirich of C. B. Dolge Co., Westport, Conn. Following the general session the first meeting of the Automotive Division takes place. A social feature, company open houses, begins at 5:30 p.m.

The second morning of the meeting opens with a general session, during which reports of C.S.M.A. officers will be presented and a nominating committee for officers and the board of governors for 1953 will be elected. The use of isotopes in industry, carboxyl methyl cellulose as a fabric size and "Economic and Political Observations of a World Trip" by J. L. Brenn of Huntington Laboratories, Huntington, Ind., will be discussed.

Resumption of meetings of the divisions follows the Tuesday, June 10, group luncheon, for which Dr. Leonard C. Mead, research coordinator of Tufts College, Boston, is the guest speaker. He will discuss "Human Resources and Industrial Relations."

The meeting concludes with the reception and banquet in the grand ballroom, the evening of June 10.

Highlighting the discussion program are several symposiums. These include "Germicide Evaluation, What Test Method?" before the Disinfectant and Sanitizers Division meeting, Monday morning. W. A. Hadfield of Pennsylvania Salt Manufacturing Co. is the moderator. The Insecticide Division on the same day has a similar type of presentation dealing with "Industrial Uses of Insecticides," for which Alfred Weed of John Powell & Co., New York, is moderator. "Aerosol Paints" and "Aerosol Valves" will be discussed in panels, Tuesday afternoon, June 10. The paint discussion will be presided over by L. C. Mackeldon of Continental Can Co., New York; while F. L. Shackleford of the Kinetic Chemicals Division of du Pont, is the moderator for the valve discussion. A symposium, "Insect Control by Chemical Vaporizers" with E. J. Campau of Standard Oil Co. of Indiana, Whiting, Ind., as moderator, is being presented Tuesday afternoon before the Insecticide Division meeting. A joint session of the Soaps, Detergents and Sanitary Chemicals and the Waxes and Floor Finishes Divisions begins at 2:00 p.m. on Tuesday, June 10.

The newly formed Automotive Division will be addressed by C.S.M.A. president, C. L. Weirich and the Association's managing director, H. W. Hamilton, at its first meeting, Monday afternoon, June 9. In addition papers will be presented by A. M. Moore, of R. M. Hollingshead Corp., Camden, N. J. He will discuss, "Thirty Years of Automotive Specialties." What automotive products are bought by the Federal Supply Service of the General Services Administration will be discussed by John J. Crawford of the New York G.S.A. headquarters.

Program chairman for the meeting is T. Carter Parkinson of McCormick & Co., Baltimore, C.S.M.A. vice-president, who is gen-

C. L. WEIRICH, President



MELVIN FULD, Vice-Pres.



H. W. HAMILTON, Secretary



eral program chairman. William Flatow of West Disinfecting Co., Long Island City, N. Y., is in charge of entertainment and Ira P. MacNair of MacNair-Dorland Co., New York, is in charge of arrangements.

Program for the 38th Midyear Meeting Chemical Specialties Manufacturers Assn., Sheraton-Plaza Hotel, Boston, Monday and Tuesday June 9-10

Monday Morning, June 9

Aerosol Division (Oval Room)

Edmond G. Young, Kinetic Chemicals Division, E. I. du Pont de Nemours Co., Wilmington, Del., division chairman, presiding.

9:30 a.m. Address of division chairman.

9:40 a.m. Election of administrative committee for 1953.

9:45 a.m. "What the Chemical Business Man Wants to Know about the Aerosol Industry," by John J. Craig, associate editor, *Chemical Week*, New York.

10:10 a.m. "Army and Navy Aerosol Procurement Program" (Symposium)
Moderator, Lt. (S/G) Eugene Greene, Jr., U.S.N.R., Navy Purchasing Office, New York.
"Procurement Planning Policy and Practice" by Jack Schlossman, Navy Purchasing Office, New York.
"Research and Development Program" by Dr. Ray Treichler, Research and Development Division, Office of Quartermaster General, Washington, D. C.
"Inspection Policy and Procedure" by E. F. Williams, Quartermaster Testing Laboratories, Philadelphia.

11:15 a.m. "Odor Problems in Aerosols" by J. H. R. Stephenson, Givaudan-Delawanna, Inc., New York.

Disinfectant and Sanitizers Division (Hub Room)

10:00 a.m. Russell G. Puhle, Tykor Products Division, Borden Co., New York, division vice-chairman, presiding.

10:00 a.m. Forum: "Germicide Evaluation, What Test Method"
Moderator, W. A. Hadfield, Pennsylvania Salt Manufacturing Co., Philadelphia.
Panel: Dr. E. G. Klarmann, Lehn & Fink Products Corp., Bloomfield, N. J.; Dr. Luther A. Black, Chief, Milk & Food Sanitation Laboratory, U. S. Public Health Service, Cincinnati; Dr. L. S. Stuart, Chief, Bacteriological Section, Insecticide Div., U. S. Dept. of Agriculture, Washington, D. C.; Dr. Herman A. Shelanski, director, Industrial Toxicology Laboratories, Philadelphia; Dr. Leon Buchbinder, assistant director, Bureau of Laboratories, Department of Health, City of New York; Dr. W. L. Mallman, professor of bacteriology and public health, Michigan State College, East Lansing, Mich.

Insecticide Division (State Suite)

9:30 a.m. James A. Green, Standard Oil Co. (Indiana), Chicago, division chairman, presiding.

9:30 a.m. Address of Division Chairman.

9:45 a.m. Election of administrative committee for 1953.

9:50 a.m. "Insect Control by Chemicals" by A. W. A. Brown, head, department of zoology, University of Western Ontario, London (Ont.) Canada.

10:15 a.m. "Biosynthesis of Radioactive Pyrethrins Using C^{14O2}" by John P. Pellegrini, Jr., A. C. Miller and R. V. Sharpless, Gulf Research & Development Co., Pittsburgh, presented by A. C. Miller.

10:30 a.m. Symposium: "Industrial Uses of Insecticides"
Moderator, Alfred Weed, John Powell & Co., New York.
Panel: (Fabrics), George R. Ferguson, Geigy & Co., New York; (Dairies), R. T. Orr, Diversey Corp., Chicago; (Packing Plants), W. Schwab, Armour & Co., Chicago; (Insect Proofing of Paper), Howard A. Jones, U. S. Industrial Chemicals, Inc., Baltimore.

11:30 a.m. "Recent Advances in the Knowledge of Housefly Biology" by Luther S. West, head, Department of Biology, Northern Michigan College, Marquette, Mich.

Soaps, Detergents and Sanitary Chemicals Division (Grand Ballroom)

9:30 a.m. H. L. Sanders, Ninol Laboratories, Inc., Chicago, division chairman, presiding.

9:30 a.m. Address of division chairman.

9:40 a.m. Election of Administrative Committee for 1953.

9:45 a.m. "Microbiological Cleanliness of Dishes Washed under Practical Conditions. Part II" by Lawrence H. Flett, National Aniline Division, Allied Chemical & Dye Corp., New York and Albert Guiteras, Hudson Laboratories, Inc., New York.

10:15 a.m. "Newer Methods for Detergency Measurements" by E. H. Armbruster and G. M. Ridenour, University of Michigan, School of Public Health, Ann Arbor, presented by Mr. Armbruster.

10:45 a.m. "Chelating Agents in Soaps, Detergents and Sanitizing Products" by H. W. Zussman, Alrose Chemical Co., Providence, R. I.

11:15 a.m. "Milled All-Purpose Detergent Bar for Use in Fresh and Sea Waters" by C. F. Jelinek, R. L. Mayhew and J. A. Yeager, General Aniline & Film Corp., Easton, Pa.

11:45 a.m. "Toxicity of Soaps, Synthetic Detergents and Sanitizers" by Louis C. Barail, consulting biochemist and toxicologist, New York.

Waxes and Floor Finishes Division (Ballroom Foyer)

9:30 a.m. Donald M. King, Masury Young Co., Boston, division chairman, presiding.

9:30 a.m. Address of division chairman.

9:40 a.m. Election of administrative committee for 1953.

9:45 a.m. "Special Process Shellac for Emulsion Floor Waxes" by Irving Lipman, Acme Shellac Products Co., Newark, N. J.

10:15 a.m. "Separation High Melting Microcrystalline Waxes by Urea Complex Formation" by Dr. Franklin Mange, Petrolite Co., St. Louis.

10:45 a.m. "Waxes for Conductive Floors" by Dr. W. W. Walton, National Bureau of Standards, Department of Commerce, Washington, D. C.

11:15 a.m. "Discussion of Carnauba Wax" by Jose Bettencourt Machado, acting director, Brazilian Government Trade Bureau, New York.

11:45 a.m. "The Detection of Additives in Vegetable Waxes. Part II. Use of Instrumental Analyses" by Dr. Charles J. Marsel, Howard Brenner and Frank DeLong, Dept. of Chemical Engineering, New York University and Cyril S. Treacy, Mamaroneck Chemical Co., Mamaroneck, N. Y., presented by Dr. Marsel.

Monday Afternoon, June 9

12:30 p.m.

Group Luncheon (Grand Ballroom)

General Session (Grand Ballroom)

C. L. Weirich, C. B. Dolge Co., Westport, Conn., C.S.M.A. president, presiding.

1:15 p.m. Address of C.S.M.A. president.

1:30 p.m. "A Business Man in Government" by Francis J. Curtis, vice-president, Monsanto Chemical Co., St. Louis.
2:00 p.m. "Some Ideas in Selling Sanitation" by D. F. Coppell, vice-president in charge of sanitation, Wagner Baking Co., Newark, N. J.
2:30 p.m. "Sociological Aspects of World Trip" by J. L. Brenn, Huntington Laboratories, Inc., Huntington, Ind.

Automotive Division (Oval Room)

3:00 p.m. "The C.S.M.A. and the Automotive Chemicals Division" by C. L. Weirich, C.S.M.A. president.
3:15 p.m. "The Executive Office and the Automotive Division" by H W. Hamilton, C.S.M.A. secretary.
Appointment of temporary division chairman and nominating committee.
3:30 p.m. "Thirty Years of Automotive Specialties" by A. M. Moore, R. M. Hollingshead Corp., Camden, N. J.
3:50 p.m. "Purchases of Automotive Specialties by the Federal Supply Service, General Services Administration" by J. J. Crawford, Federal Supply Service, New York.
4:30 p.m. Report of nominating committee.
Election of officers.
5:30 p.m. Company open houses.

Tuesday Morning, June 10

General Session (Hub Room)

Melvin Fuld, Fuld Brothers, Inc., Baltimore, C.S.M.A. 1st vice-pres., presiding.
9:30 a.m. Report of the Treasurer by P. C. Reilly, Reilly Tar and Chemical Co., Tuckahoe, N. Y.
9:35 a.m. Appointment of committees and committee reports.
9:40 a.m. Report of the Secretary by H. W. Hamilton, C.S.M.A. secretary.
9:50 a.m. Election of nominating committee for officers and board of governors for 1953.
10:00 a.m. "Industrial Uses of Isotopes" by S. Allan Lough, Isotopes Division U. S. Atomic Energy Commission, Oak Ridge, Tenn.
10:30 a.m. "C.M.C.—Unique Fabric Size" by Werner C. Brown, Hercules Powder Co., Wilmington, Del.
11:00 a.m. "Economic and Political Observations of World Trip" by J. L. Brenn, Huntington Research Laboratories, Inc., Huntington, Ind.
11:30 a.m. "Washington Today" by John D. Conner, C.S.M.A. Washington counsel.
11:45 a.m. Report of legislative committee by W. S. Jessop, U. S. Sanitary Specialties Corp., Chicago.

Tuesday Afternoon, June 10

12:30 p.m.

Group Luncheon (Grand Ballroom)

1:30 p.m. "Human Resources and Industrial Relations" by Dr. Leonard C. Mead, research coordinator, Tufts College, Boston.

Aerosol Division (Oval Room)

George Barr, G. Barr & Co., Chicago, presiding.
2:00 p.m. Symposium: "Aerosol Paints"
Moderator: L. C. Mackeldon, Continental Can Co., New York.
Panel: J. G. Ellis, Sprayon Products, Inc., Cleveland; J. J. Gregory, Aeropak, Inc., Chicago; Fred S. Palmer, Kinetics Chemical Div., E. I. du Pont de Nemours & Co., Wilmington; H. S. Lawton, Hercules Powder Co., Wilmington, Del.
3:00 p.m. Symposium: "Aerosol Valves."
Moderator: F. L. Shackelford, Kinetic Chemicals Div.
Panel: Frederick J. Lodes, Precision Valve Co., Yonkers, N. Y.; W. R. O'Donnell, Valve Corporation of America, Bridgeport, Conn.; Walter C. Beard, Jr., Risdon Mfg. Co., Naugatuck, Conn.; R. J. Boyer, Dill Mfg. Co., Cleveland; Paul Engstrum, Paul Engstrum Associates, Washington, D. C.; John Bador, Viking Valve Co., Minneapolis.
4:00 p.m. "Glass Aerosols" by Ralph Thomas, Bristol-Myers Engineering Co., Hillside, N. J.
4:30 p.m. Committee reports.
Post Office Regulations, W. E. Graham, Crown Can Co., Philadelphia; Flammability of Aerosol Products, Dr. W. E. Baulieu, Bridgeport Brass Co., Bridgeport, Conn.; Product Survey, Dr. Edmond G. Young, Kinetic Chemicals Div.

Disinfectant and Sanitizers Division (Hub Room)

W. X. Clark, Sterwin Chemicals, Inc., New York, division chairman, presiding.
2:00 p.m. Address of division chairman.
2:10 p.m. Election of administration committee for 1953.
"Sanitation Problems in Poultry Production" by Dr. W. C. Darby and Vivian Harris, Ralston Purina Co., St. Louis, presented by Dr. Darby.
2:15 p.m. "Evaluation of Antibacterial Properties of Various Antiseptic Soaps by In Vivo and In Vitro Methods" by Dr. William S. Gump and Dr. Arthur P. Cade, Sindar Corp., Delawanna, N. J., presented by Dr. Gump.
2:45 p.m. "New Developments in the Diagnosis of Paint Mildew" by Dr. Milton Goll, Nuodex Products Co., Elizabeth, N. J.

Insecticide Division (State Suite)

Dr. George W. Fiero, Esso Standard Co., New York, presiding.
2:00 p.m. "The Use of Insecticides in Public Health" by Dr. Justin Andrews, Officer in Charge, Communicable Disease Center, U. S. Public Health Service, Atlanta, Ga.
2:30 p.m. Symposium: "Insect Control by Chemical Vaporizers."
Moderator: E. J. Campau, Standard Oil Co. (Indiana) Whiting, Ind.
Panel: "Chemical and Entomological Effectiveness" by Dr. R. A. Fulton, Agricultural Research Administration, U. S. Dept. of Agriculture, Beltsville, Md.; "Chemical Employed" by T. Walter Reed, California Spray-Chemical Corp., Haddonfield, N. J.; "Applications" by Harvey L. Sweetman, Professor of entomology, Univ. of Massachusetts, Amherst, Mass.; "Observations on Field Performance" by William O. Buettner, National Pest Control Association, New York;; "Toxicological" by Stanley J. Leland, M.D., Medical consultant to American Aerovap, Inc., New York.
3:30 p.m. "Fundamental Investigations of the Mode of Action of Insecticides" by Andrew J. Forgash, research fellow, Department of Entomology, Rutgers University, New Brunswick, N. J.
"The U. S. Department of Agriculture and Its Relation to Industry Raw Material Requirements for Pesticides" by Harold B. Shepard, staff specialist, Office of Materia s and Facilities, Production and Marketing Administration, U. S. Dept. of Agriculture, Washington, D. C.

Joint Session: Soaps, Detergents and Sanitary Chemicals Div. and Waxes and Floor Finishes Division (Ballroom Foyer)

Dr. C. S. Kimball, presiding
2:00 p.m. "Oleoresinous Floor Finishes" by C. R. Given, Bakelite Div., Union Carbide & Carbon Corp., New York.
2:30 p.m. "A New Look at Floor Cleaners" by Louis E. Wells, Jr., Peck's Products Co., St. Louis.
3:00 p.m. "Maintenance of Asphalt Tile Floors" by J. O. Heppes, Azrock Products Division, Uvalde Rock Asphalt Co., San Antonio, Tex.
3:30 p.m. "Preparation of Floors for Waxing" by Vladimir Dvorkovitz, Diversey Corp., Chicago.
4:00 p.m. "Wax Remover Evaluation" by F. J. Pollnow, Jr., and Martin Maglio, Vestal Laboratories, Inc., St. Louis. Presented by Mr. Maglio.

Tuesday Evening, June 10

6:30 p.m. Cocktail party, ballroom foyer.
7:30 p.m. Informal banquet, grand ballroom.

Modern Automobile Polishes

THE last few years have seen a number of interesting developments in automobile polishes. Undoubtedly the most important is the employment of silicones in improved polish formulations. The appearance in 1949 of spray waxes also attracted considerable attention. The older, standard type automobile polishes have likewise benefited from the use of various new raw materials and improved manufacturing techniques.

It may be said that these and other developments can be attributed to the requirements of a growing, yet increasingly competitive market. The buying public has learned that the regular use of a polish not only improves a car's appearance, but often adds to its value as well. At the same time, these millions of car owners have continued to demand products that yield brighter, longer-lasting polishings with less effort.

Considering the actual and potential market, several authorities in the field have suggested certain standards for automobile polish performance. Thus, according to Wood, (1) to obtain and keep a high gloss, a polish must: (a) remove dirt (e.g. traffic film), (b) remove slight scratches and unevenness, and (c) form a thin, glossy, cloudless and continuous film which protects the car finish from the atmosphere.

Going into somewhat more detail on the essential requirements of an auto polish, Vallance (2) feels that the following characteristics are important: (a) It should be relatively noninjurious to the finish; (a) it should spread easily, wet the surface thoroughly and evenly, and be readily removable; (c) it should rub up easily, clean off all the dirt, brighten up "dead" patches, and leave a lustrous, nonoily surface; and (d) the drying period should be long enough to allow easy working over a large area, yet be short enough to avoid a long wait before the polish dries. This authority also notes that smudging and smearing are obvious faults that must be avoided. He also calls attention to the fact that an unpleasant odor may be a drawback to an otherwise satisfactory polish.

As remarked by Moore, (3) the oxidation and deterioration of a good automobile finish can definitely be retarded and stopped by the correct use of polishes and related compounds. This task has been made easier during recent years, not only through the development of improved auto polishes, but also through the use of other efficient car-care products. (4)

Five Main Classes

MANY types of automobile polishes are available and various systems for classifying these products have been suggested. These range from the eight categories listed by Moore to the three groups suggested by Vallance. In this review, however, automobile polishes will be divided into five main classes, (5) as follows: (a) emulsified oil polishes, (b) cleaner-polishes, (c) products that give a combined cleaning, polishing and waxing effect, (d) pre-wax cleaners, and (e) wax polishes. Products made with silicones can be included in some of these groups but will be discussed separately. Although they have many properties in common with wax polishes, the spray type products are perhaps best considered as a separate group.

Products of the first class, namely polishes of the oil emulsion type, are not hard to make and are the easiest to use. They are intended for application after the car is washed, but this preliminary cleaning is not always done. Since they contain no cleaning agents, such polishes cannot do a good job of removing dirt, road haze, chalked pigment and the like. They merely form a film of oil on the surface to give a quick shine that lasts only a few days.

As noted by Moore, (3) there are many formulations for products of this type. Essentially, however, they are water-in-oil or oil-in-water emulsions that are generally based on mineral oil or blends of oil and solvents, like kerosene and mineral spirits. A typical modern formula (6) for making such an oil polish calls for the use of:

	Parts
Mineral oil, light	48.0
Sulfonated castor oil (50%)	16.0
Oleic acid	6.6
Monoethanolamine	0.5
Water	60.0

Dissolve the oleic acid in the oils and stir in the amine. Stir for about five minutes. If the mixture is not clear, add oleic acid a little at a time until clarity is attained. Finally, add the oil solution to the water with vigorous stirring to form a creamy, stable emulsion. If desired, the last step may be omitted and the clear oil solution can be marketed with directions to mix it with an equal amount of water before use.

Recently, Boe and Lowstuter (7) found that the gloss-imparting properties of emulsion polishes could be improved by the inclusion of a resin or resin-like material. According to their patent, a product of this kind may consist of:

	Per Cent
70% chlorinated paraffin resin	15.0
Butyl oleate	10.0
Mineral oil, light	25.0
Fatty acid amine acetate	1.0
Glycerine	2.0
Water	47.0

Cleaner-Polisher

IN THE main, polishes of the first class differ from those of the second class in that the latter contain a cleaning agent. This addition is in the form of a mild abrasive, such as diatomaceous earth, tripoli, silica or the like, which serves mechanically to remove dirt, road film, and chalked pigments. In addition to the abrasive and the usual oil polish ingredients, cleaner-polishes may contain such agents as bentonite and vegetable or synthetic gums, to help keep the abrasives in suspension. Solvents are included to assist in the removal of greases and



By Milton A. Lesser

solvent-soluble soil. Occasionally, small proportions of wax are included to give a somewhat more durable luster. A novel addition, suggested by Smith and his colleagues, (8) serves to prevent corrosion of the polish-containing cans. They use a water-soluble salt of a higher aliphatic amine for this purpose.

Indicative of the composition of the cleaner-polish type of product is the following general formula, as given by Moore: (3)

	Per Cent
Water	40-60
Mineral oil, light	10-20
Alcohol	5-10
Solvents (e.g. kerosene or mineral spirits)	10-20
Abrasive	10-15
Emulsifiers, suspending and wetting agents	4- 6
Perfume and color	sufficient

More specific is the following formula (9) for a liquid car polish:

	Parts
Abrasive or abrasive mixture	10
Mineral oil, light	10
Kerosene	2
Sulfated fatty alcohol (liquid)	3
Ammonium oleate	3
Methyl cellulose (2% aqueous dispersion)	40
Water	32

As previously mentioned, waxes are sometimes included in a cleaner-polish to impart an effect considered superior to that of a polish without this addition. Indicative is a product (2) consisting of:

	Parts
Wax, high melting	1.0
Methyl cellulose	1.5
Mineral oil, light	10.0
Kieselguhr or amorphous silica	15.0
China clay	2.5
Water, to make	100.0

Polishes with Wax

WHILE cleaner-polishes represent a marked improvement over oil emulsion automobile polishes, they do not offer much protection to the cleaned surface. This is understandable, since most of the cleaner-polishes leave only a thin, short-lived film of oil on the surface. To overcome this failing, a fairly high proportion of mixed waxes is included in the combination-action products which provide a cleaning, polishing and waxing effect. (5) As pointed out by one authority, (3) such combination products are in great demand because of the ease with which satisfactory results can be obtained. Millions of cans of this third class of auto polishes are sold annually.

Worth noting at this point are the standards for liquid automobile polish as given in Federal Specification P-P-546. This requires that the polish shall be suitable for use on lacquer, baked enamel and synthetic enamel finishes. It must be a stable aqueous emulsion and the polish should have no objectionable odor. The product should be a free-flowing fluid that can be applied readily with a cotton cloth, and the polish should spread easily. Analytically, the non-volatile matter, total solids, must be not less than 25 per cent by weight. Volatile matter should consist essentially of water. No caustic should be present and the neutralization number should not be more than 5. All of the material must pass through a No. 200 sieve. Other physical data and performance tests are given in the specification.

The formulation of the combined action products becomes more complicated with the inclusion of wax mixtures. The proportions and types of waxes used will depend upon the ease of polishing desired and the required hardness of the final film. Varying the water and solvents content will influence the consistency of the emulsion. This property will also be affected by the type of abrasive used.

Illustrating the way waxes can be blended to produce the desired results is the following combination which, according to Warth (10) yields an automobile polish of the cleaning and polishing type that will leave a bright, hard film:

	Parts
Carnauba wax	8.0
Ouricuri wax	2.0
Beeswax	4.0
Petroleum ceresin	3.0
Petrolatum	0.5
Naphtha	70.0
Stearic acid	8.0
Triethanolamine	3.0
Water	80.0
Tripoli	55.0

The waxes, stearic acid and amine are melted together and the naphtha slowly stirred in. The temperature is maintained at 90 to 95° C., and when the solution is clear, the tripoli is added and thoroughly mixed in. Heat the water to boiling and add to the naphtha solution with vigorous stirring until a good emulsion is obtained. Continue to stir slowly until the product has cooled to room temperature.

In the following formula (11) both oil and wax are used as polishing agents:

	Parts
Carnauba wax	5.0
Beeswax, white	2.0
Ceresin wax	2.0
Stearic acid	3.0
Mineral oil	10.0
Triethanolamine	1.0
Naphtha	18.0
Colloidal magnesium aluminum silicate (Veegum*)	2.2
Water	41.8
Diatomaceous earth	15.0
Preservative	sufficient

* R. T. Vanderbilt Co., New York, N. Y.

Mix the first five ingredients and the preservative and heat on a water bath, stirring until uniform. Heat the amine and add to the previous mixture and then incorporate the naphtha slowly with stirring. Add the colloidal silicate to the water slowly, agitating continually until smooth. Add the gel thus formed to the wax mixture and slowly add the abrasive with mixing.

The following combination yields an emulsion paste product that is described by Wood (1) as being a particularly rapid polisher that gives good results on old, worn and pitted paint and on metalwork:

	Parts
Rosin	3
Carnauba wax	4
Paraffin, 140°F.	7
White spirit	36
Bentonite	6
Water	38
Soda ash	3
Glycerine	3

Melt the waxes and thin with the white spirit. Paste the bentonite with a small amount of water, and when smooth thin out very gradually with the rest of the water; the soda ash and the glycerine being dissolved in the final solution. This aqueous phase is slowly added in a thin stream to the wax-solvent mixture, with thorough and continuous stirring.

As is well known, the wax deposit left by the combined action polishes is neither as great nor as durable as that formed by the straight wax polishes. Not so widely recognized, however, is the fact that even the superior wax polishes cannot give top performance unless the car surface is cleaned prior to waxing. It is for this reason that pre-wax cleaners comprise a very useful group of auto polishing aids.

Pre-wax Cleaners

ACCORDING to Moore, (3) a good liquid pre-wax cleaner will remove accumulated road film and chalked pigments through a solvent or surface-active action, aided by mild, non-scratching cleaning powders. Such products should contain a minimum of oil, so that the cleaned surface is dry and oil-free. As a result there will be nothing to interfere with the deposition of the wax film. Paste type pre-wax cleaners are also available, but generally they are hard to apply and remove. Moore reports that liquid type pre-wax cleaners are easier to use. A general formula for making these liquid formulas is given as follows, with stress on the careful selection of the correct type of cleaning powders:

	Per Cent
Water	50-65
Mineral oil	10-15
Cleaning powders	10-20
Solvents	15-20
Emulsifiers, suspending and wetting agents	5-10

Paste Wax Polishes

WHEN a correctly formulated wax polish is applied in the right way to a previously well cleaned car, a tough, durable and glossy film is the result. The wax polishes are generally provided as pastes made by dissolving suitable blends of waxes in appropriate solvents. However, wax polishes are also available in liquid form. This form can be produced, in some cases, by merely increasing the solvents content.

A number of synthetic waxes have been developed during recent years and some of them have found their way into auto wax polish formulations. (12) Carnauba wax, of course, is still recognized as a superior basic material for auto wax formulations and is generally accepted as the best natural wax for producing a hard, non-smearing gloss. However, the problems of price and procurement have encouraged the search for and use of carnauba replacements and extenders. Wood, (1) for example, is of the opinion that distilled montan wax can replace any of the carnauba waxes with "complete satisfaction." He also points out that other vegetable waxes, particularly candelilla, blend very well with carnauba wax, the following paste car polish offering a good example of such use:

	Parts
Carnauba wax, yellow	1
Candelilla wax, prime Mexican	11
Beeswax	3
Paraffin, 140° F.	5
White spirit	80

This product, it is said, is light colored, sets very well and gives good results, not only on paintwork, but on wood and leather as well.

Warth (10) similarly suggests that a wax base for making paste polish might contain:

	Per Cent
Carnauba	20.0
Candelilla wax	55.0
Ozokerite	5.0
Paraffin	20.0

To make a paste polish, 30 parts of this base are mixed with 70 parts of mineral solvent. The latter may consist of 60 parts of naphtha and 10 parts of kerosene, or a little turpentine and pine oil may be added to the mineral spirits.

Recently, Pabst and Holzinger (13) suggested the use of a new type of solvent in the production of paste and liquid wax polishes. The solvent consists of a fraction of alkylate produced by condensing olefins with isoparaffins in the presence of an acid. This solvent has a sufficiently bland odor so that no perfume is required, gives increased body to the wax, and results in simplified and improved manufacture. Indicative of the useful-



ness of the new solvent is its employment in the following modern paste polish, as given in the patent:

	Parts
Carnauba wax, No. 3, refined	3
Candelilla wax, refined	8
Paraffin wax, refined, 145°F.	12
Microcrystalline wax	3
Novel solvent	74

In his text on waxes, Warth (10) notes that certain blends of synthetic resin with wax may be useful in improving the gloss and wear resistance of paste polishes. Wood (1) similarly observes that synthetic resins can be very useful in polish manufacture. Although considerable investigation may be needed before a good formula can be developed, he reports that the following produces a good polish with an excellent performance:

	Parts
Zinc resinate	10.00
Carnauba wax, fatty grey	3.00
Ozokerite	2.25
Paraffin, 140°F.	9.50
White spirit	75.25

Silicones in Polishes

THE introduction of silicones into polish formulation is considered to be one of the most important advances in this field in recent years. In the case of automobile polishes, the silicones have been used to develop products with such desirable characteristics as quick applicability, water repellency, easy washability, high gloss, and durability. Showing good resistance to outdoor weathering, the silicones are able to stand up under the effects of temperature changes, salt spray, traffic fumes, and road scum. They also have low surface tension so that they readily wet and cling to finishes, metals, and glass surfaces. This makes for ease of application and development of a high gloss with minimum rubbing. (14)

These characteristics and advantages are of particular importance in building consumer acceptance. In addition, however, polishes based on silicones also appeal to the manufacturer. This, as explained by Dugan, (15) is due to the fact that such polishes are relatively easy to produce, make use of readily available domestic waxes, and have excellent shelf life.

According to Todd, (4) the methyl silicone fluids are the most useful silicones for polish formulations. They can be produced in a wide range of viscosity grades, but those ranging from 50 to 1,000 centistokes are recommended for polish production. The ease of rub-out and the gloss obtained are related to the viscosity of the silicone fluid used in the formulation. The lower the viscosity, the easier the rub out, but the higher viscosity fluids give a somewhat better gloss. (16)

From the standpoint of polish formulation, it is also important to know that fluids or oils are soluble in such solvents as gasoline, kerosene, naphtha, and Stoddard solvent. Although they are not soluble in water, alcohols and glycols, to make water-containing polishes, the silicones may be emulsified with morpholine oleate, ammonium oleate or the stearates of the amines. The fluids may also be emulsified with non-ionic or cationic emulsifiers.

The use of a cationic emulsifier to make a silicone polish for automobile and other surfaces is shown in the compositions described by Baer and Concannon, (17) as follows:

	Per Cent
Silicone oil	5 -15
Volatile hydrocarbon solvent	10 -75
Water	24.5-75
Cationic emulsifier	0.1-12

Octadecyl amine acetate is the preferred cationic emulsifying agent. It is claimed that such an agent gives better results because it deposits the silicone polishing agent more rapidly onto the surface and bonds it more tenaciously than would be the case if other types of emulsifiers were used.

From an examination of this formula it is evident that this product might well be included among emulsified oil polishes of the first class. Silicone products of this type generally contain from two to four per cent of the silicone fluid, plus various proportions of solvent; the rest being water and emulsifying agent. In such a product, the silicone produces a gloss and leaves a protective film, while the solvent helps to clean and remove the old wax and oil film. (18)

Todd (14) has remarked that in products where the silicone serves as the main polishing agent rather than as an adjunct, it is sometimes advantageous to add small quantities of other polishing ingredients. Waxes may be used in this way in silicone formulations to give improved polishing action on rough or scratched finishes, to reduce water spotting, or to lower costs. An automobile polish made along such lines has been suggested by Bolton, (19) as follows:

	Per Cent
Silicone	4.0
Mineral spirits	46.6
Emulsifier (Atlas G-2133*)	2.5
Synthetic wax (Gersthofen KPS**)	1.5
Water	45.4

* Atlas Powder Co., Wilmington, Del.
** George H. Lincks, Inc., Brooklyn, N. Y.

(*Turn to Page* 173)

AN ANNOUNCEMENT

THE UNIQUE

INTERDEPARTMENTAL COMMITTEE ON PEST CONTROL

A Statement on the Health Hazards of Thermal Generators as Used for the Control of Flying Insects.

The Interdepartmental Committee on Pest Control composed of representatives of the Departments of Agriculture, Interior, and Defense, and the Federal Security Agency held its regular third quarterly meeting on September 21, 1951 at Washington, D. C. This Committee agreed upon the following release relative to the use of insecticidal vaporizing devices:

"It is the considered opinion of the Interdepartmental Committee on Pest Control that there are at present no data to indicate that the use of thermal generators dispensing only lindane, DDT, or mixtures of the two, for the control of flying insects is unsafe when the following restrictions are enforced:

1. The insecticide shall be released at the rate not to exceed 1 gram per 15,000 cubic feet per 24 hours
2. Installation shall be made only in commercial or industrial premises, mess halls, and similar locations where human exposure will be on a working basis — not continuous.
3. The devices should not be used in homes or sleeping quarters.
4. Devices shall be so constructed that output in excess of that recommended is impossible. Fuses to protect against overloading and high temperatures, and a pilot light to indicate whether or not the unit is operating should be 'built-in' features.
5. Units should be mounted above head height and 3 feet or more from the ceiling.
6. Installation shall be such that any material which might condense on nearby equipment, walls, or ceiling cannot be dislodged and fall into or otherwise contaminate food.

Since DDT and lindane are poisons, it is the opinion of the Committee that danger will arise from deliberate or unintentional violation of these basic principles."

H. L. HALLER, CHAIRMAN
Address:
Bureau of Entomology and Plant Quarantine
Department of Agriculture
Washington 25, D. C.

S. W. SIMMONS, SECRETARY
Address:
Technical Development Services
Communicable Disease Center
U. S. Public Health Service
P. O. Box 769
Savannah, Georgia

Washington, D. C.
September 21, 1951

READ THIS AUTHORITATIVE STATEMENT CAREFULLY



THIS STATEMENT, MADE BY OFFICIALS RESPONSIBLE FOR SAFEGUARDING PUBLIC HEALTH, CONFIRMS THE NECESSITY FOR THE BASIC STANDARDS THAT HAVE GOVERNED THE AEROVAP DESIGN, MANUFACTURE AND OPERATION FROM THE BEGINNING.

The

of IMPORTANCE ABOUT AEROVAP PROCESS PATENT*

* UNITED STATES LETTERS PATENT 2,541,637 — METHOD OF VAPORIZING LINDANE IN VENTILATED ROOMS

In the original conception of the Aerovap process, the prime objective was to produce an automatically operated device which would vaporize chemicals at a uniform rate, in predetermined minute quantities, for the purpose of continuously dispersing an insect toxicant without any deleterious effect on human beings. The result was the thermostatically regulated Aerovap instrument — carefully engineered to control chemical vaporization rates within milligram tolerances.

In the Aerovap instrument there is embodied the best available components to give long life and high quality performance. There is not a single part that could be omitted, or even cheapened, without detracting from this performance or without introducing a health hazard. In short, nothing has been sacrificed in our endeavor to give the public a safe and efficient insect control system.

Specifically incorporated in the Aerovap instrument are provisions to permit the user to determine readily for himself that the chemical vaporization rate meets the recommendations of the Federal Government. The user is not left to the mercy of false advertising claims. The user is not induced to operate a vaporizer that is designed with an indifference to, or an ignorance of, how to achieve the basic standards essential to public health as set forth in the Governmental committee statement.

It is indeed gratifying to us that, in the first of several patent infringement suits instituted by American Aerovap, Inc. to come to trial, a United States Federal District Court upheld the validity of the Aerovap process patent which was cited as being "Good and valid in law and equity". In his opinion the judge commented "The plaintiff's invention is a commercial success. The plaintiff expended large sums in laboratory research, and in the perfection of what it is offering in its patent."

Recognizing the fact that our patented process is vested with a public interest, American Aerovap, Inc., will consider applications for license under its exclusive method patent from reputable persons or organizations interested in its commercial development and willing and able to maintain standards recommended by the Interdepartmental Committee on Pest Control. These standards have been set in the best interests of public health and welfare. Licenses will be granted on uniform and reasonable terms and American Aerovap, Inc., will extend full cooperation, including its research and know-how, in connection with its process patent and in addition, the critically important equipment used for practicing the patented art.

On the other hand, American Aerovap, Inc. will continue its effort to eliminate irresponsible commercial exploitation of its invention by sponsoring effective regulations to stop hazardous abuse of the method and by pressing for rapid adjudication of infringements of its patent.

We have tested a variety of thermal generators that have recently appeared on the market, including some that advertise conformance with the Interdepartmental Committee recommendations, and have found them to be entirely unreliable and potentially hazardous.

★ ★ ★

If you are interested in distributing the original, reliable and genuine vaporizing instrument, we will be pleased to furnish appropriate details together with the names and addresses of AEROVAP Distributors near you. We believe that their experience with our company and product will be helpful to you in arriving at a final decision.

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Asphalt Tile Maintenance

By J. O. Heppes* Azrock Products Div. Uvalde Rock & Asphalt Co.

SINCE my last appearance before the C. S. M. A. in December, 1949, the volume of asphalt tile sold and installed throughout the United States has increased roughly 50 percent, so that the importance of proper maintenance of asphalt tile has even greater weight at this time.

For the benefit of those who are not familiar with the general composition and structure of asphalt tile, let us try and review briefly the materials which go into its make-up and the manufacturing methods employed in producing asphalt tile.

Asphalt tile is composed of asbestos fibers, mineral coloring pigments and inert fillers bound together with a binder which, in the case of dark colors, consists of Gilsonite asphalt, and in the case of intermediate and light colors, resins either of the Cumarone Indene type, or those produced from petroleum.

These materials are first thoroughly mixed together in a Banbury mixer, or some other type of internal mixing device, to a uniform homogeneous mass. This mass is then callendered and sheeted to a uniform thickness and then cut into a variety of sizes through automatic or semi-automatic cutting equipment.

The surface of the tile at the finish of the manufacturing process is relatively smooth. Asphalt tile is usually furnished in two thicknesses—1/8" and 3/16", and in a variety of sizes which make possible the installation of the tile in many designs and patterns. Altogether, approximately 25 colors in both solid and marbleized effects are available.

Since asphalt tile is essentially a matrix of asbestos fibers held together with asphaltic or resinous binders, the resistance of the product to cleaning and waxing materials is dependent on the resistance of the binders themselves to those materials.

As most of you know, there are four groups of colors designated in the Industry as Groups A, B, C, and D. Groups A and B colors are usually made with Gilsonite binder, and Groups C and D with resinous binders. Resinous binders are usually more susceptible to strong cleaning materials than Gilsonite asphalt. It, therefore, is logical to use the resistance of Groups C and D Asphalt Tile colors to strong cleaning agents as a basis for determining a standard for use on asphalt tile colors as a whole.

It is also helpful to understand the general marketing channels through which asphalt tile is sold. Probably the majority of sales are made through flooring contractors who sell the product on an installed basis to the user. A large percentage of the production of the industry is now being distributed to jobbers and wholesalers who, in turn, sell to the flooring contractor. The large mail order houses buy a considerable quantity of asphalt tile and distribute it through their retail stores, some of it on the installed basis, and some of it directly to the user who installs it himself. This variety of distribution methods makes somewhat more difficult the education of the user of the product, particularly as it pertains to the proper cleaning and waxing of asphalt tile. Since the present trend in the merchandising of asphalt tile promises to add further to the complexity of the industry's marketing set-up, it is obvious that close cooperation between the manufacturers of cleaning and waxing materials, and the asphalt tile manufacturing group is necessary if the user is to get good and economical maintenance of his asphalt tile floor.

The principal problems in cleaning asphalt tile are not unlike those of cleaning any other smooth surfaced or resilient flooring. The objective, of course, is to be able to remove dirt, both on the surface, and embedded in the surface, quickly and economically without damaging the composition of the product. The technical research committee of the Asphalt Tile Institute has spent a great deal of time and effort in defining the limits within which a safe and effective cleaner for asphalt tile may be made. As you no doubt are aware, the Institute has issued specifications on three types of cleaners, (1), Soap Type Cleaners, (2) Non-Soap Type Cleaners, (3) Synthetic Detergent Type Cleaners. It is not the purpose of this discussion to dwell on the detailed requirements of these specifications. No doubt all of you have studied them and know what they contain. The Asphalt Tile Institute believes it offers a guide which, if followed, will result in cleaning materials that will not injure asphalt tile floors, regardless of the colors which may be used in the floor.

One of the great problems that exists in the cleaning of asphalt tile floors is getting the individual, or individuals, who actually clean the floors to use cleaning materials properly. Directions for the proper use of any cleaning material should be exceptionally well written and easy to find on the container. Even then it is often difficult to secure the wholehearted cooperation of the people who actually

* Paper presented at 38th midyear meeting C.S.M.A., Boston, June 10, 1952.



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use the cleaner so that they will use it properly and economically. Anything that can be done by the cleaner manufacturers to prevent the misuse of his product is certainly welcomed by the manufacturers of asphalt tile. Generally speaking, cleaners that meet the specifications of the Asphalt Tile Institute will bring about satisfactory results if properly used.

The problem of a wax finish to be used on the asphalt tile floors is equally important. The Asphalt Tile Industry has long recommended the avoidance of any type of wax except a water emulsion wax. The technical research committee of the Institute has also developed and published a specification which, in its opinion, provides adequate requirements for determining whether or not any water emulsion wax is satisfactory for use on asphalt tile floors.

Waxing Asphalt Tile

AGAIN, proper instructions for the application of such wax are tremendously important if it is to be used properly by the owner of the asphalt tile floor. Asphalt tile floors cannot be waxed properly unless they are thoroughly dry and clean before wax is applied. It is highly desirable that wax be applied in a thin film and not too often. The building up of an excessive wax film on asphalt tile floors prevents them from being cleaned and maintained effectively and has a tendency to cause the floor to get dirtier faster, and of course, adds, to the cost per square foot of maintaining the floor.

Within the last two years the development of so-called "non-slip" waxes has added somewhat to the confusion of asphalt tile floor owners. These "non-slip" waxes have certain characteristics in use that are different from normal water emulsion wax, and it is extremely important that direction for use of these "non-slip" waxes be specific and clear so that maximum benefit can be obtained from them. The Asphalt Tile Institute's specification does not contain a requirement with regard to this characteristic of "non-slip." However, there are no objections to such a type of wax on the part of asphalt tile manufacturers as long as they meet the Institute's specifications. In fact, successful "non-slip" water emulsion waxes are a decided asset to the asphalt tile industry.

Use of Sweeping Compounds

IN ADDITION to cleaning materials and water waxes, another type of material that is commonly used in maintaining asphalt tile floors is sweeping compound. The only type of sweeping compound that will not harm an asphalt tile floor is that in which the wood sawdust, which is the basis for most sweeping compounds, is treated with water emulsion type wax, and not with various types of oils. In other words, an oil-based sweeping compound should never be used in maintaining an asphalt tile floor.

The Institute has prepared specific maintenance recommendations which are widely distributed by its members and to the general public on request. These recommendations are brief and specific and include certain "Do Nots" which are important in avoiding trouble in cleaning and waxing asphalt tile. These include the following:

(1) Do not use strong detergents or cleaners which are not readily soluble in water.

(2) Do not use cleaners that contain solvents, such as gasoline, kerosene, benzene, turpentine, oils, free fats, alkali or acids.

(3) Do not use waxes containing such solvents as turpentine and benzene, as they soften the tile and cause colors to bleed.

(4) Do not use varnishes, lacquers, shellac, or other plastic finishes. These materials usually contain solvents which will permanently injure asphalt tile.

(5) Do not use oil-base sweeping compounds as they will soften the tile and muddy its appearance.

Conclusion

IN CONCLUSION, we would like to state that asphalt tile manufacturers feel that cleaners and waxes made and sold for use on asphalt tile should conform to the specifications developed and published by the Asphalt Tile Institute. We believe that container instructions for the use of cleaners and waxes should be clearly stated and should be easy to read. We believe that the asphalt tile industry and the chemical specialty manufacturers should work together to educate those people who actually use and apply cleaners and waxes, so that misuse of good cleaners and waxes can be avoided. We would like to recommend, also, that on large installations of asphalt tile in commercial and institutional areas that proper equipment for cleaning and waxing be urgently recommended to the owners, so that the final result will be proper use of materials and a satisfactorily maintained asphalt tile floor.

Again, we wish to emphasize the close cooperation between manufacturers of cleaners and waxes and manufacturers of asphalt tile is essential if the ultimate user of this type of floor is to secure economical and satisfactory maintenance. In the development of new types of cleaners, waxes or finishes, we urge you to cooperate with the technical research committee of the Institute in having it investigate the use of such products on asphalt tile floors. This type of cooperation cannot help but result in mutual benefit to both groups.

Varley Has New Jet Sprayer

A new jet-action type insecticide dispenser was introduced recently by James Varley & Sons, Inc., St. Louis, Mo., national distributors of the unit which is made by Z & W Machine Products Co., Cleveland. The "Challenger" can be set to spray insecticides and glycol formulations in amounts ranging from a few ounces per hour up to 4½ gallons per hour in either a very fine aerosol fog or in coarse spray. It can be attached directly to a 55, 30 or 15 gallon drum and can be set by time clock to go on and off automatically. The unit contains no pumps or moving parts, uses no water or steam. It operates by drawing in large volumes of air and extruding them through portholes under high pressure. It weighs approximately twelve pounds and has a one gallon capacity. Varley has developed a special glycol solution for use in the "Challenger" air conditioning systems.



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Pyrethrum

. . . at the crossroads

By H. Alvin Smith
President John Powell & Co.

SINCE the advent of DDT and other chlorinated insecticides, many have questioned the future of pyrethrum. After the first commercial usage of DDT, there were those who immediately sold pyrethrum short and felt that at long last the days of this botanical insecticide were numbered. Subsequently, they were joined by others when the synthesis of allethrin was first announced.

There were some, though, who felt that pyrethrum had a place, particularly when activated by one of the recently developed synergists. However, even they did not believe pyrethrum would be able to withstand the price pressure of the new lower-cost insecticides, and when the pound sterling was devaluated a few years ago, concluded that prices of pyrethrum in view of the questionableness of demand should decline.

We did not share any of these views and for reasons following believed that pyrethrum would continue in reasonably tight supply *and accordingly on a firm price basis.*

a) Plantings abroad had reached *new lows,* so that in the face of any reasonable demand, pyrethrum was bound to be in short supply.

b) Worldwide, we were in the midst of a post-war inflationary trend and costs in the growing regions were no exception.

c) Ramularia disease was spreading and its effects were costly and disastrous.

d) Pyrethrum had withstood the initial shock of the new chlorinated compounds, and notwithstanding the interest in the new insecticide allethrin, it was obvious that much work still had to be done if only from a production point of view before allethrin could affect pyrethrum.

Actual conditions these last few years have confirmed this reasoning. Thus we saw pyrethrum go from a period of extreme long supply in the initial post war period to a position of short supply through the last several years. Now, however, supply seems relatively in balance with demand and when considering cost and market conditions existing today, the pressure is on sales rather than on supply.

Now, unfortunately, the recent shortage of pyrethrum is reflecting itself unfavorably. There is no question but that the use of allethrin in the armed forces aerosols was hastened by lack of adequate pyrethrum supplies during the last several years.

As in all supply-demand cycles, following a period of strong demand, production usually increases. Pyrethrum is no exception. We are experiencing today larger pyrethrum production in the East African growing regions; and encouraged by recent high prices, increasing quantities have been developed again in both Brazil and Japan. Other growing regions such as Ecuador and Peru are being stimulated because of these higher prices and also by the interest of some American manufacturers who are still interested in the long range future of pyrethrum.

Future Predicted

ACCORDINGLY, this brings us to a period in the history of pyrethrum where we may now very appropriately say "Pyrethrum is at the Crossroads." It is almost an economic certainty that the future market for pyrethrum now priced at the highest level in recent pyrethrum history is extremely limited if this price structure is maintained. Before we try to predict the future of pyrethrum,

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it would be well to review some of the existing factors which will influence this trend one way or the other. At a time when competitive pressure is increasing to lower pyrethrum prices, conditions in the growing regions are moving in an opposite direction.

Everyone is familiar with some of the reports emanating from East Africa over the last several years of the problems of growing pyrethrum—adverse effects of the weather, competition from other crops, the continued serious development of ramularia disease.

Recently, in addition, there have been other technical problems. For some years in Kenya the authorities have been trying to develop a higher yielding strain of flowers. The economic advantage of this is obvious, even though there always was the question as to whether this was as practical an approach as trying to increase yield per acre in order to accomplish the same economic advantage. Now the ever-present analytical problems are being aggravated by serious vagaries in analytical results with these higher yielding strains. For the first time too, with some of the higher strains biological differences when correlating with chemical assays are presenting worrisome problems.

The problem of transit losses has always been present. The higher pyrethrin content and higher value of pyrethrum in recent years have accentuated these deterioration losses during the long shipping period from the growing areas to the manufacturers in the States. Recently the growers have been experimenting and thinking about their own manufacturing facilities in order to eliminate these losses. Such experimentation requires considerable capital investment and even then initially such production could hardly be expected to yield efficient or quality results in complex processes which have taken an American industry years to improve.

The same ever-present inflationary conditions with which we are confronted in this country are present abroad. Costs of everything in the growing region—labor not excepted—have been rising. It is understandable, therefore, why it is difficult for the growers abroad to be thinking of *lower* prices for pyrethrum even though they recognize that it is presently too high-priced.

Let us turn to the technical aspects of pyrethrum presently existing. First and foremost, of course, is the question of allethrin. Many have looked upon allethrin as synthetic pyrethrum. Notwithstanding its pyrethrum-like chemical structure, nothing could be further from the truth. Really it should be viewed as another of the newer insecticides — and one requiring a costly, complex manufacturing process.

However, the fact that allethrin is a threat to pyrethrum is not to be underestimated. Reasonable existing production coupled with two large-scale plants nearing completion attest to this. Yet, except for a specific limited use, the demand for allethrin at present is restricted. The problems facing allethrin are the development of other analogs of cinerin which will broaden its toxic effects, or the development of activators which will accomplish something similar in connection with existing compositions of allethrin.

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(*Turn to Page* 189)

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Evaluation of Antibacterial Activity

Part I

By Eugene M. Britt and L. B. Schweiger
Miles-Ames Research Laboratory
Elkhart, Indiana

THE evaluation of the antibacterial activity of new antiseptics has been and still is a major problem confronting bacteriologists. Many tests have been devised to determine the antiseptic qualities of various compounds. No single one of these tests, however, is without its limitations and deficiencies.

Consequently, in attempting to evaluate any agent, a testing program must be devised which includes as many different types of antiseptic tests as are feasible. Especially in the case of the quaternary ammonium cationic compounds (QAC) is the foregoing true. These compounds have been enjoying increasing popularity for use as antiseptics. Their antibacterial activity in high dilutions has brought them into demand in industries and homes where there is a need for economical and efficient chemical germicidal agents.

Which tests to use in evaluating an antiseptic depends upon the properties to be determined in a given germicide. Salle and Catlin[1] have proposed some minimum criteria for antiseptic agents. These are: (1) the highest dilution capable of killing *Micrococcus pyogenes* var. *aureus;* (2) extent of bacteriostasis; (3) influence of organic matter; (4) speed of action; (5) penetrability; and (6) toxicity.

To determine these properties, they recommended that the following tests be performed: (1) modification of the FDA test for determining the killing dilution against *M. pyogenes* var. *aureus;* (2) bacteriostatic tests in 10 and 100 ml. of FDA broth and thioglycollate medium; (3) similar tests in the presence of 10 per cent serum; (4) tests for killing in time periods of from one to 10 minutes; (5) penetration tests, using the FDA agar-cup-plate method; and (6) toxicity tests on embryonic chicken heart tissue.

According to Reddish[2], "Studies of this character give considerable information relative to the properties of antiseptics. In fact a combination of these tests will give information from which the practical value of an antiseptic may be predicted, or at least they will reflect its potentialities. Furthermore, the methods employed are all standard procedures that have been used separately for some years. . . . Since each test shows certain specific properties of antiseptics, collective results give a correct and useful profile of the antiseptics tested."

In addition to the minimum properties proposed by Salle and Catlin, other characteristics may be present in a new compound and tests designed to evaluate these properties should be done.

For several years, Miles-Ames Research Laboratory has directed its efforts toward the development of a new general household antiseptic.† The final formula contains polyethylene glycol mono-iso-octyl phenyl ether, chlorothymol, alcohol four per cent, water, propylene glycol, and essential oils along with di-isobutyl cresoxy ethoxy ethyl dimethyl benzyl ammonium chloride (Hyamine 10X*) as the antiseptic agent. The results of a combination of tests designed to evaluate the various properties of the above formulation gave information from which the practical value of this new antiseptic was predicted.

In Vitro Methods

FDA Test for Liquid Antiseptics

ALTHOUGH the FDA test for liquid antiseptics[3] is no longer considered official according to Welch[4], it is a practical method and was used to determine the highest dilution of Bactine capable of killing *M. pyogenes* var. *aureus* in 10 but not five minutes. The inconsistencies that occur in phenol coefficient data on highly active QAC have been the subject of interest to investigators for several years. Inconsistency of the culture media[5], phospholipid content of peptones[6], mutation of the test organism[7], loop transfer method[8], and bacteriostasis[9, 10, 11] by the QAC have all been cited as being contributory factors to inconsistent end points in the test. Various modifications have been proposed to overcome some of these objections.

In the determination of the bactericidal spectrum of Bactine, the FDA test for liquid antiseptics was followed in detail except for the following modifications: vigorous shaking prior to making each loop subculture was done to reduce clumping and adherence of the bacteria to the side of the tube, and a so-called T.A.T. broth, proposed by Armbruster and Ridenour[11], was used as a QAC neutralizing subculture medium to overcome the bacteriostatic effect of the formula. The test organisms were 18- to 24-hour cultures grown in FDA broth. Through the use of these modifications and repeated performances of the test, "spotty" results were practically eliminated. Table 1 shows the highest dilution of Bactine being bactericidal for *M. pyogenes* var. *aureus* FDA 209 and a variety of other organisms in 10 but not five minutes.

The range of dilutions of Bactine that effected a kill of the test organisms in 10 but not five minutes varied from 1:10 for *Pseudomonas fluorescens* to 1:1600 for *Neisseria catarrhalis*. *Mycobacterium tuberculosis* was not tested by the FDA method because of the inherent difficulties in culturing the organism; however, the method used was similar and for this

* Registered trade mark of Rohm and Haas Co., Philadelphia.
† "Bactine", a product of Miles Laboratories, Inc., Elkhart, Ind.

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Table 1

The Bactericidal Spectrum of Bactine as Determined by the FDA Test, 37°C.

Test Organism	Highest Dilution Killing in 10 but not 5 min.		Phenol Coefficient
	Bactine	Phenol	
Micrococcus pyogenes var. aureus FDA 209	1:200	1:80	2.5
Micrococcus lysodeikticus	1:700	1:120	5.8
Gaffkya tetragena	1:300	1:100	3.0
Sarcina lutea	1:600	1:90	6.7
Sarcina aurantiaca	1:700	1:100	7.0
Streptococcus faecalis	1:1000	1:100	10.0
Neisseria catarrhalis	1:1600	1:150	10.6
Lactobacillus arabinosus	1:900	1:110	8.2
Pseudomonas aeruginosa	1:50	1:110	0.45
Pseudomonas fluorescens	1:10	1:130	0.076
Pseudomonas pyocyaneus	1:100	1:120	0.83
Salmonella typhosa	1:250	1:90	2.77
Escherichia coli	1:1000	1:130	7.7
Proteus vulgaris	1:100	1:140	0.71
Mycobacterium tuberculosis*	1:2	..	..

* Subcultured on Petragnani slants.

reason the results have been included in the table. In general, Bactine was more effective against the gram positive cocci than against the gram negative rods.

Most workers in the field are aware of the limitations of the phenol coefficient as a measure of germicidal activity. According to Reddish[12], phenol coefficients of antiseptics other than phenol-like compounds are meaningless. Since two per cent phenol is so generally recognized as an effective antiseptic, it serves well as a standard of comparison in the FDA test; however, it is not intended to compare Bactine with phenol. Phenol controls were done merely to check the resistance of the test organism, but since this information was available phenol coefficients were calculated. When testing QAC by this method, the use of neutralizing agents in the subculture media is necessary in order to obtain results which are not fictitiously high due to bacteriostasis[9, 10, 11, 13, 14, 15, 16]. When inhibitors such as T.A.T. broth, Tamol N, lecithin, and the like are used, the phenol coefficient test or modifications thereof may be employed for determining approximate dilutions for practical use[10].

Since Bactine was designed for use as an antiseptic and disinfectant, it was necessary to determine its bactericidal activity, both at 37° and 20° C., and the effect of organic matter upon its antiseptic activity. Consequently, FDA tests were done under these varied conditions. The procedure was the same as used in determining the bactericidal spectrum. The test organisms were 18- to 24-hour cultures of *M. pyogenes* var. *aureus* FDA 209 and *Salmonella typhosa* grown in FDA broth. Table 2 shows the effect of temperature and organic matter upon the antiseptic activity of Bactine.

Although the activity of Bactine decreased with temperature and organic matter markedly lowered its germicidal potency, there still existed with the undiluted antiseptic a sufficient margin of safety to make it a highly active germicide.

Kolmer Bacteriostatic Test

The Kolmer bacteriostatic test[17] is extremely simple and yields sharply defined results. It was used to determine the highest dilution of Bactine capable of restraining the growth of the test organism for a stated period of time. To each of a series of tubes containing nine ml. of a one per cent suspension of an 18- to 24-hour culture of the test organism in nutrient broth was added one ml. of a dilution of Bactine which would result in the final dilution desired. At the end of five days incubation at 37° C. the tubes were observed for growth. The results were expressed as the highest bacteriostatic dilutions. In the case of fastidious organisms, veal infusion broth was substituted for nutrient broth. The results shown in table 3 illustrate the magnitude of the bacteriostatic activity of Bactine against a representative group of organisms.

Table 3

The Bacteriostatic Activity of Bactine as Determined by the Kolmer Test

Test Organism	Highest Bacteriostatic Dilution
Micrococcus pyogenes var. aureus	1:4000
Diplococcus pneumoniae	1:3000
Streptococcus hemolyticus	1:4000
Bacillus subtilis	1:2560
Bacillus anthracis	1:2560
Neisseria catarrhalis	1:7000
Salmonella typhosa	1:400
Proteus vulgaris	1:100
Escherichia coli	1:1000

The dilutions of Bactine that exert bacteriostatic activity ranged from 1:100 for *Proteus vulgaris* to 1:7000 for *Neisseria catarrhalis*. The results are similar to those obtained in the FDA test in that Bactine is more effective against the gram positive cocci than against the gram negative rods. As with other QAC Bactine is bacteriostatic in extremely high dilutions.

Percentage-Kill Test

To determine the speed of ac-

Table 2

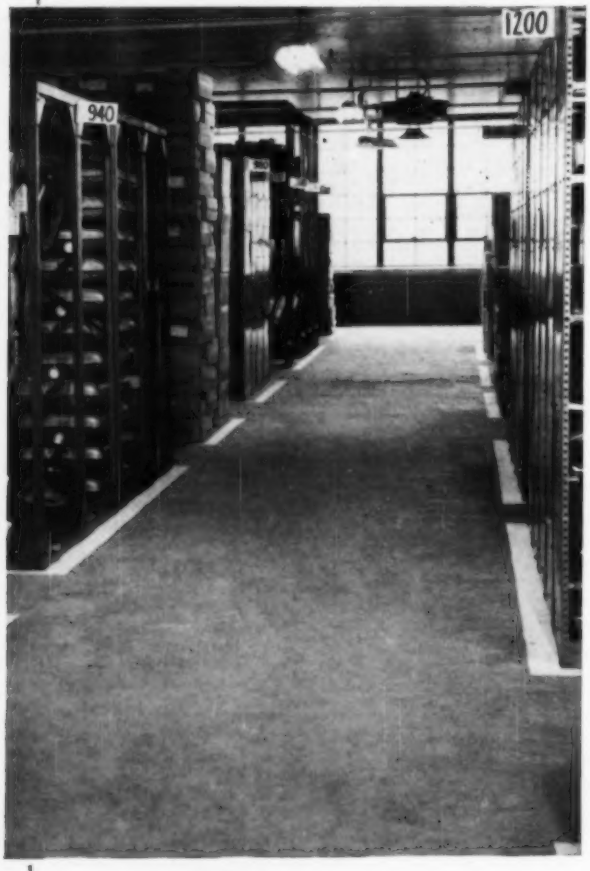
The Effect of Temperature and 10% Serum upon the Bactericidal Activity of Bactine

Test Organism	Highest Dilution killing in 10 but not 5 min.		
	10% Serum Absent		10% Serum Present
	37°C.	20°C.	37°C.
Micrococcus pyogenes var. aureus FDA 209	1:200	1:100	1:50
Salmonella typhosa	1:250	1:100	1:10

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Table 4

Speed of Action of Bactine

Test Organism	Conc. of Bactine	Percentage-kill of initial count (>3.6 x 10^8) Length of Exposure in seconds 30	60	180	300
Micrococcus pyogenes var. aureus.....	undiluted	99.99+	100.00	100.00	100.00
Micrococcus pyogenes var. aureus.....	1:50	99.70	100.00	100.00	100.00
Micrococcus pyogenes var. aureus.....	1:100	99.60	99.99+	100.00	100.00
Micrococcus pyogenes var. aureus.....	1:150	99.00	99.99+	100.00	100.00
Micrococcus pyogenes var. aureus.....	1:200	98.40	99.99+	99.99+	100.00
Salmonella typhosa	undiluted	100.00	100.00	100.00	100.00
Salmonella typhosa	1:50	100.00	100.00	100.00	100.00
Salmonella typhosa	1:100	99.33	100.00	100.00	100.00
Salmonella typhosa	1:150	99.00	99.99+	100.00	100.00
Salmonella typhosa	1:200	98.80	99.99+	100.00	100.00

tion of Bactine, a so-called "percentage-kill" test[32] was used. This method involved mixing one ml. of an 18- to 24-hour culture of the test organism grown in FDA broth with nine ml. of the antiseptic in a special mixing apparatus. The mixing apparatus consisted of a two-necked round bottom flask, one neck of which was fitted with a mercury seal air driven stirrer. The entire apparatus was sterilized intact, and the test was conducted under aseptic conditions. The antiseptic and organisms were added separately through the second neck of the flask and at various intervals of from one to five minutes one ml. samples were removed aseptically, diluted with sterile distilled water, and pour plates made from which the number of surviving organisms was determined. An initial count of the homogeneous bacterial suspension diluted 1:10 to correspond to the initial bacterial concentration in the medication mixture was made to serve as a control.

In all tests the initial count exceeded 360,000,000 organisms/ml. T.A.T. agar was used to neutralize any bacteriostatic effect of the QAC carried over during transfer from the medication flask to the pour plates. The number of surviving organisms was then plotted against time of exposure to the antiseptic to determine the percentage of organisms killed per unit of time. Table 4 illustrates the speed of action of Bactine.

Bactine, undiluted, completely kills *M. pyogenes* var. *aureus* within one minute and *S. typhosa* within 30 seconds. Under the conditions of the test in which over 3.6 x 10^8 organisms were exposed, a 99.99+ per cent kill in the medication mixture was sufficient to demonstrate the quick lethal action of high dilutions of Bactine. As has been pointed out by Pressman and Rhodes[18], it is entirely academic whether by laboratory tests germicides kill 100 per cent of the test organisms or 99.99+ per cent, especially when such germicides have been proven to be effective by practical-use tests. Therefore, the results of this test indicate that Bactine, even when progressively diluted up to 1:200, is extremely rapid in action. The constant stirring of the medication mixture during the performance of the test may have enhanced the rapid action of Bactine somewhat by breaking up or preventing the formation of clumps of bacteria, reducing the adherence of the organisms to the walls of the flask and in general permitting greater contact of the antiseptic with individual cells.

Filter-Paper Disc Method[19]

A number of reports, summarized by Lawrence[20], demonstrate the inadequacy of the filter-paper-disc or agar-cup-plate methods for QAC testing. These findings were verified in experiments performed to evaluate the activity of Bactine as measured by zones of inhibition on an agar medium seeded with *M. pyogenes* var. *aureus*. Reproducibility of zones of inhibition with progressive dilutions of Bactine was not obtained. Although Bactine did show some activity, results were extremely irregular. There was complete lack of correlation between the activity as shown by zones of inhibition on seeded agar and serial dilutions in broth. The lack of proper diffusion may be due to the inability of QAC ionic aggregates to pass through the agar network or to possible physical adsorption of QAC onto the agar. This test has little value in estimating the germicidal worth of Bactine.

With the exception of toxicity, this test completed the initial study of Bactine and the determination of the antiseptic activity of Bactine according to the criteria set forth by Salle and Catlin. Chronic and acute toxicity studies carried out by another department of the laboratory, and tests made on exposed areas of skin which revealed no demonstrable cutaneous reactions indicated the low order of toxicity of the formula[21].

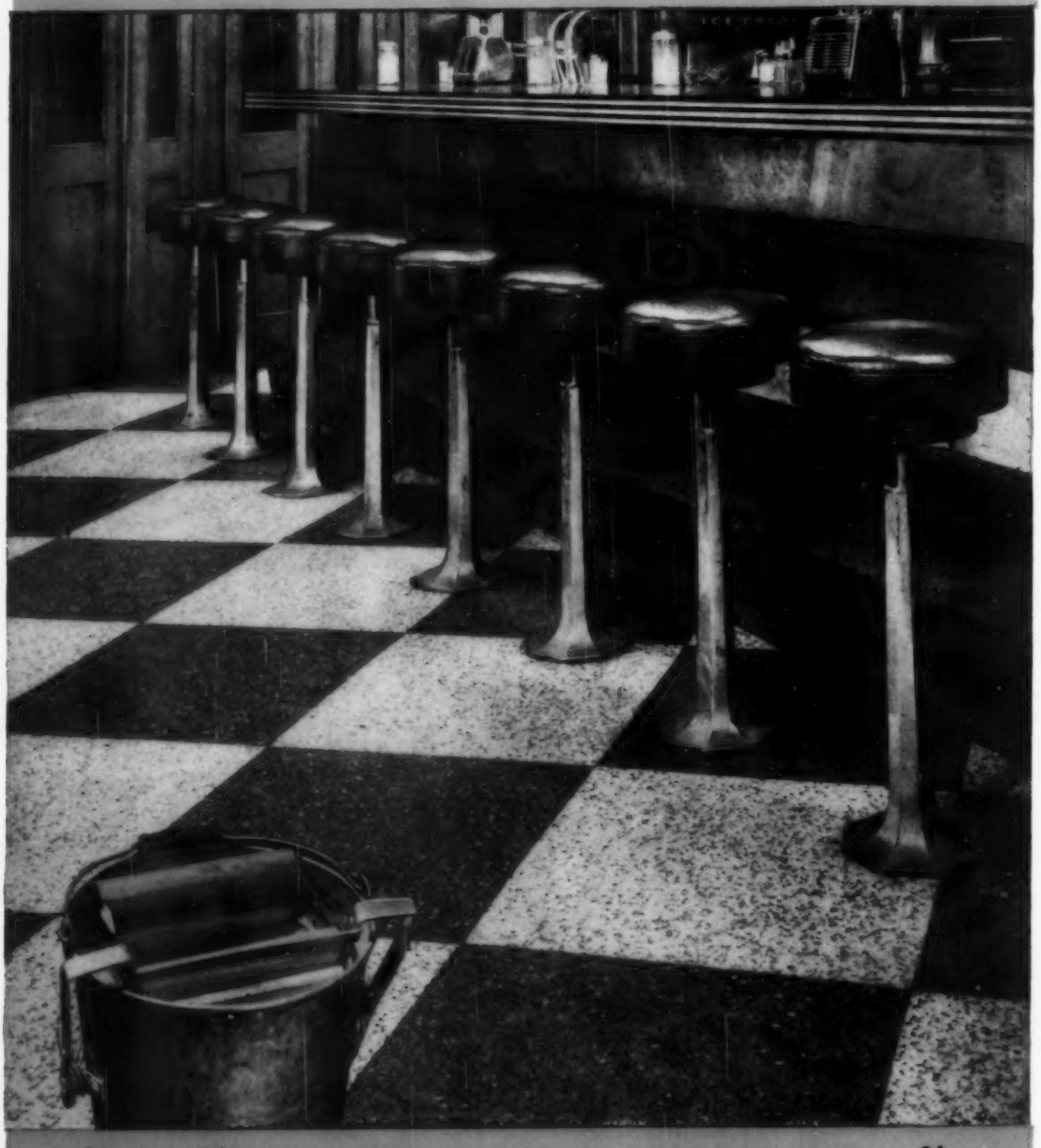
In summary, the results of these *in vitro* studies demonstrated: (1) the highest dilution of Bactine capable of killing *M. pyogenes* var. *aureus* and other organisms in 10 but not five minutes; (2) the extent of bacteriostasis; (3) the speed of action; (4) the effect of temperature and organic matter upon the activity of the germicide; and (5) the inadequacy of the filter-paper-disc method when used for evaluating Bactine.

The evaluation of an antiseptic on the basis of any one of these tests alone may easily prove to be a costly error. It is only when considered collectively that the results assume a significant meaning. With these basic characteristics determined, additional properties that Bactine was believed to possess were evaluated. It was desirable to know the effect of Bactine

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upon various contaminated objects such as wood, cloth, instruments, skin, and the like. Since the trend in antiseptic testing today is toward tests which more accurately simulate conditions of actual use of the germicide, laborious and time-consuming methods were employed to evaluate these properties under as closely simulated conditions of use as laboratory facilities would permit.

Practical-Use Methods

Hand-Wash Experiments

RECENTLY, Swan, *et al*[22] published data which showed that a four-minute scrub with a three per cent aqueous solution of "Hyamine 10X" followed by a one-minute soak in the same agent gives more consistent and complete reduction of removable bacteria on the hands than does the standard soap, water, and alcohol routine which requires eight minutes. Moreover, the number of removable organisms remains abnormally low for two hours after the application of "Hyamine 10X." Since one principal agent used in Bactine is "Hyamine 10X," it seemed advisable to carry out a similar program of practical-use methods.

The procedure used was essentially that of Swan, *et al*, a modification of the method of Price[23]. All pipettes, petri dishes, towels, gloves, brushes, basins, water and media were sterilized by autoclaving (15 lbs.-15 min.) prior to each use. The experiments were all performed in the same room, and air contamination, checked daily, was found to be insignificant.

The initial bacterial flora of the left hand of each subject was obtained by a specified type of brush scrub extending to the wrist for one minute in a basin containing one liter of sterile water. The hand was then scrubbed over a sink for the prescribed time in the solutions to be tested and rinsed in tap water. Whenever the test solution was Bactine, the preceding step was followed by a one-minute scrub in a basin containing an 0.5 per cent solution of an anionic detergent (Tide) so as to neutralize the QAC. This is an extremely important step since slight amounts of QAC, if not neutralized by the anionic detergent, would be carried over into the wash water and serve as a highly effective bacteriostatic agent.

The hand was then immersed, agitated for one minute in a basin containing sterile water, and wiped with a sterile towel. The evaluation of the remaining bacterial flora was then obtained by scrubbing the hand for one minute in each of a series of three basins, each containing one liter of sterile water. A sterile brush was used for each basin. The hand was then immersed in a basin containing Bactine for one minute.

The subject was allowed to pursue his normal occupation for two hours. At the end of this time the hand was again scrubbed in a series of three basins each containing one liter of sterile water. No antiseptic was used again at this time. Bacterial counts were obtained in the following manner: three separate one ml. samples of water were obtained from each basin following a vigorous stirring with a sterile pipette. Plates were made of each sample and counts obtained after incubation at 37° C. for 48 hours. The final postscrub count was then determined by computing the average of the three samples taken from each basin and determining the average mean of the three basins. These counts were expressed as bacteria/ml. To determine the basin count, the average would be multiplied by 1,000.

A second experiment was performed using the same procedure as outlined above except that a hand wash was substituted for the brush scrub. The subjects used were volunteer office and laboratory personnel employed by Miles Laboratories, Inc. Four different subjects were used for each treatment. Typical results of brush-scrub and hand-wash methods and the agents used in each treatment are shown in table 5.

In both the hand-wash and brush-scrub methods, the per cent reduction of removable bacteria from hands treated with Bactine increased as the length of exposure to the antiseptic increased. In all cases, a 2-minute exposure of the hands to Bactine was sufficient to effect a greater per cent reduction of removable organisms than the standard eight-minute soap, water, and alcohol routine.

(*Turn to Page* 171)

Table 5

The Antibacterial Activity of Soap, Alcohol and Bactine on the Bacterial Flora of the Hands

Agent and Length of Exposure	Prescrub Count Bacteria/ml	Postscrub Count Bacteria/ml 0 hours	Postscrub Count Bacteria/ml 2 hours	Reduction of Removable Bacteria from the hands % 0 hours	Reduction of Removable Bacteria from the hands % 2 hours
Brush-Scrub					
Water, 3" (control)	364	776	960	00.00	00.00
Soap, 7", 70% alc., 1"	4480	835	586	81.37	86.91
Soap, 7", 70% alc., 1", Tide 1"	940	545	212	42.02	77.44
Bactine, 1"	>3000	664	200	77.86	93.33
Bactine, 2"	833	83	31	90.03	96.27
Bactine, 3"	986	68	2	93.10	99.80
Bactine 4"	500	28	7	94.40	98.60
Hand-Wash					
Water, 3" (control)	200	466	941	00.00	00.00
Bactine, 1"	1500	238	129	84.13	91.40
Bactine, 2"	516	55	2	89.34	99.61
Bactine, 3"	1020	103	1	89.90	99.90
Bactine, 4"	1193	49	15	95.90	98.74

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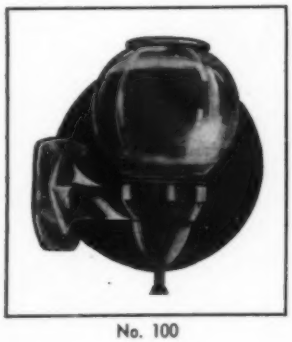
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MGK 50th Anniversary



The McLaughlin Gormley King Co. plant in Minneapolis.

McLAUGHLIN GORMLEY KING CO., Minneapolis, processor, formulator and supplier to the insecticide industry, is celebrating its fiftieth year in business. The company was founded in 1902 by Alexander McLaughlin to grind and process botanical drugs. Members of the King and Gormley families became partners soon thereafter, and the company was incorporated under its present name in 1908. About 1920, the management specialized in the processing of pyrethrum flowers, then known as "insect flowers." Various kinds of extract and concentrations were developed including the trade-marked product "Ever Green," still widely used by amateur gardeners.

In 1930, the first method of assay for pyrethrin content was developed, known as the Gnadinger-Corl or copper reduction method. This led to the standardization of pyrethrum extract for the first time. McLaughlin Gormley King Co. also produced the first "highly concentrated extract" known as "Pyrocide 20," standardized to contain two grams of pyrethrins per 100 cc. This enabled manufacturers for the first time to produce insecticides of measured and uniform effectiveness.

Thus came to an end an era in pyrethrum characterized by products of uncertain values. Buyers of extracts in those days were familiar with "five pound" and "one pound" extracts meaning the extractive matter from five or one pound of pyrethrum flowers per gallon. They took hold avidly of the new "20 pound concentrate" called "Pyrocide 20." The term "20 to one" persists even today in respect to extract intended for dilution one in twenty. In the early days this term had a dual meaning; that is, the extractive matter from 20 pounds of flowers per gallon which when diluted one part in 20 produced an insecticide containing the early day standard, one pound of flowers per gallon. The new standardization on the basis of pyrethrin content was, of course, a great forward step.

In 1937, McLaughlin Gormley King Co. offered the first premium for high pyrethrin content flowers in order to encourage Kenya Colony growers to develop a new and more dependable source of supply.

During World War II, McLaughlin Gormley King Co. produced more highly concentrated and purer pyrethrum concentrates, now widely used under the trade-marks "Pyrocide 175" and "Pyrocide 88." A new manufacturing plant operating at capacity used from one-quarter to one-third of all of the pyrethrum imported into the country.

GEORGE McLAUGHLIN

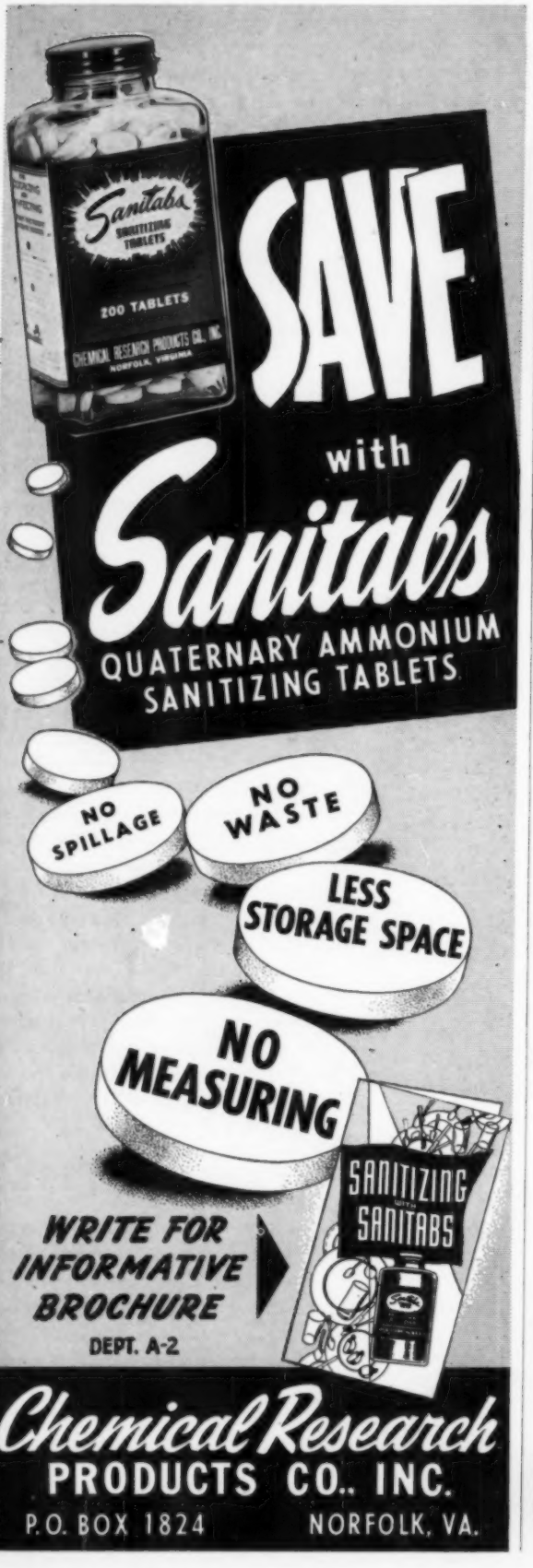


When LaForge, Schechter, et al announced the development of the allyl analog of Cinerin I, so-called "synthetic pyrethrin," McLaughlin Gormley King Co. developed an intense interest and did an extensive amount of work in entomological laboratory and field research. The company induced a very capable organic chemical manufacturing firm, Benzol Products Co. of Newark, N. J., to produce this new synthetic insecticide under contract. So successful was this joint venture that McLaughlin Gormley King Co. is credited with establishing the first large scale commercial development of pure allethrin. This has resulted in consumption of MGK Allethrin in 18 months ending April 1, 1952 of the equivalent of more than 1100 tons of high content pyrethrum flowers. More than 12,000,000 aerosol packages have by now been marketed by civilians or used by the military containing its new synthetic active principle. Many millions more are now on order and in process. The company, finding that the most suitable synergist for use with pyrethrins and allethrin appeared to be N-octyl bicycloheptene dicarboximide, purchased the patent for this product now marketed as MGK "264."

As a result of thees activities, and a continuation of a substantial pyrethrum manufacturing business, the company's sales have increased 400 percent in the last five years.

The management of the company is composed of a team of experienced personnel. George McLaugh-

(*Turn to Page* 173)



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Antibacterial Activity

(*From Page 165*)

In the case of the control water scrub, no reduction in removable bacteria from the hands was observed. Rather, an increase in the number of viable organisms resulted. This was probably due to the fact that scrubbing removes loose and dry squamous epithelium which in all probability contains large numbers of organisms.

These results are similar to those of Swan, *et al* with "Hyamine 10X," in that a scrub or wash in Bactine, containing considerably less than three per cent "Hyamine 10X," results in a more complete and consistent reduction of removable bacteria on the hands immediately after the treatment than is obtained with the other agents used. In addition, the reduction appears to be a lasting one inasmuch as in most instances it was still apparent after two hours.

Miller, *et al*[24] have reported that many of the QAC form an invisible, nonperceptible film on the hands which is antibacterial in action for several hours. Therefore, it was desirable to determine whether or not the lasting reduction in removable bacteria noted above was due to such a phenomenon as they described. In order to determine the existence of such a film another hand-wash experiment, using a modification of the procedure previously described, was done. In this experiment the right hand of the subject was washed in Bactine and the left in sterile water. Each hand was then dipped into a suspension of *M. pyogenes* var. *albus* and allowed to air dry. Counts were then made using the previously described methods. At two, four, and six hours after treatment the hands were again dipped into the suspension of *M. pyogenes* var. *albus*, allowed to air dry, and counts again obtained. No antiseptic was used at these times. Table 6 illustrates the results obtained using this technique.

The results of this modified hand-wash test indicate that Bactine, when applied to the hands, exerts an antiseptic activity against subsequent contamination for six hours after application. Obviously, some sort of barrier exists on the hands which is germicidal for organisms coming in contact with it. Further studies are being done to determine the mechanism of action of this barrier.

In conclusion, the results of a variety of modifications of the hand-wash method indicate that Bactine causes a marked reduction in the bacterial flora of the hands immediately after it is applied. In addition, it keeps the bacterial count of the hands abnormally low for several hours after application because of the formation of a barrier which is germicidal for bacteria present on the hands as well as subsequent bacterial contaminants.

(To be concluded)

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Table 6

The Residual Antiseptic Activity of Bactine against Artificially Contaminated Hands

Treatment	Bacterial Count/ml Subject A RH*	Subject A LH**	Subject B RH	Subject B LH	Subject C RH	Subject C LH	Subject D RH	Subject D LH
Staph albus 0 hours	3,220	211,200	470	96,000	6,400	89,600	2,060	128,000
Staph albus 2 hours	3,880	60,000	3,200	96,000	5,120	83,200	UD***	UD
Staph albus 4 hours	12,800	80,000	8,320	17,000	5,720	51,200	19,200	76,800
Staph albus 6 hours	22,040	51,200	6,100	16,000	10,880	38,400	20,000	76,800

* Right Hand-Bactine treated hand
** Left Hand-Water treated hand
*** Uneven Distribution

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MGK

(*From Page* 169)

lin, president and treasurer, became president in 1936. He is the son of the original founder, Alexander McLaughlin, who passed on in 1939.

Carroll A. Clark, vice president and general manager, is a graduate chemical engineer with an excellent understanding of the insecticide business.

Paul D. Torpin, vice president and general sales manager, is well



PAUL TORPIN

known throughout the trade.

Frank J. Radeck, a director and assistant sales manager, has been with the company for many years.

Other directors are: Dr. J. B. Moore, entomologist, Clifford I. Rovick, who is in charge of credit, and George A. N. King, one of the original group of partners who founded the company.

Technical research and experimentation is under the direction of Dr. A. A. Schreiber and Dr. J. B. Moore, both recognized authorities. Sales are effected through five direct representatives, plus several independent sales agencies. Distribution is national and international.

Ross Co. in 50th Year

Frank B. Ross Co., Jersey City, was founded fifty years ago by Frank B. Ross who is still actively engaged in the operation of the firm as chairman of the board. Mr. Ross joined George G. Cowl, one of the pioneers in the importation of carnauba wax, in 1897. After Mr. Cowles death in 1902 he bought the firm from the heirs and changed the name to Frank B. Ross & Co. The firm was incorporated in 1923 with Frank B. Ross as president, and R. E. Sievert, secretary and treasurer. Mr. Sievert had joined the firm in 1918.

Current officers of the company are: Frank B. Ross, chairman; R. E. Sievert, president; E. J. Sievert, vice-president; and A. A. Arnold, secretary and treasurer.

Until 1934 the firm operated in New York principally as importers of crude commodities, including waxes. During 1934 a wax refinery was established in Brooklyn. In 1938 office and factory were moved to Hoboken. In 1946 the present premises in Jersey City were purchased, and the wax refining and blending facilities increased. Importation of other crude commodities was discontinued.

Auto Polishes

(*From Page* 147)

Mild abrasives can be incorporated into silicone emulsion polishes in order to obtain a mechanical cleansing action against surface dirt, chalked finish and the like. This results in products that may be included in the second or cleaner-polish category. A general formula for making liquid emulsion products of this popular type is as follows: (16)

	Per Cent
Silicone fluid	1 -4
Morpholine	1.0
Oleic acid	2.7
Kerosene	2.0
Mineral spirits	18 -34
Water	40 -56
Abrasive	13 -15

Mix the oleic acid, silicone fluid, kerosene and solvent. Add the morpholine to the water. Place the first solution in a high speed stirrer and slowly add the aqueous solution, continue stirring until a homogeneous emulsion results. Add the abrasive slowly and in small amounts. To produce a thicker and more stable emulsion, up to about three per cent of the abrasive can be replaced with bentonite.

Providing more definite proportions is the following formula for an automobile cleaner-polish: (19)

	Parts
Silicone fluid	4.0
Solvent (Solvesso 100*)	19.0
Kerosene	2.0
Sorbitan monolaurate (Span 20**)	1.9
Polyoxyethylene sorbitan monolaurate (Tween 20**)	2.1
Diatomaceous earth	14.0
Water	57.0

* Standard Oil Co. of New Jersey.
** Atlas Powder Co., Wilmington, Del.

A very similar combination, but with morpholine as the emulsifier, is used by Currie (20) in preparing a stable, non-creaming auto polish. This product, made with a dimethyl polysiloxane fluid, not only provides a good polish, but also forms a coating that protects the car from corrosion

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due to salt spray. It is, therefore, particularly useful in coastal areas.

Wax Silicone Products

CORRESPONDING to class three polishes are silicone products containing waxes. In these combined-action emulsion products, the silicone acts not only as a polishing and gloss-imparting aid but also serves as a spreading agent for the wax. (14) The hardness of the wax is not reduced by the silicone. (18) The general composition of products of this type has been given (16) as follows:

	Per Cent
Silicone fluid	2 - 4
Wax blend	2 - 8
Diatomaceous earth	13 -15
Morpholine	1.0
Oleic acid	2.7
Turpentine	2.0
Mineral spirits	18 -34
Water, to make	100

Mix the oleic acid, silicone fluid, solvents and wax and heat to 90 to 95°C. Add the morpholine to the water and heat to the same temperature. Place the first solution in a high speed mixer and slowly add the aqueous solution, continue stirring until homogenous. Add the abrasive slowly, a little at a time.

Using a slightly different procedure, Welch (21) states that a fine emulsion type, wax-containing cleaner-polish can be made from:

	Per Cent
Silicone oil	2.0
Oxidized microcrystalline wax (A)	1.6
Oleic acid	2.0
Naphthol mineral spirits	36.6
Morpholine	0.9
Diatomaceous silica	9.8
Air-floated clay	2.4
Water	44.7

Bring the first four ingredients into solution at 140°F. Slurry the last four components together and bring to the same temperature. Add the solvent solution to the slurry with high speed agitation.

In the wax type or fifth class of polish, silicones serve as adjuncts to the wax. As with wax-containing emulsion polishes, in products based on the use of mutual solvents, the silicone content improves the wetting properties and facilitates application and polishing. (14) Indeed, Welch (21) is of the opinion that silicones are best utilized in conjunction with conventional polishing waxes rather than alone; their greatest advantage being in ease of application.

In general, liquid wax polishes made with silicones may be prepared along the following lines: (16)

	Per Cent
Silicone fluid	1 -2
Kerosene	2.0
Wax blend	2 -5
Mineral spirits, to make	100

Heat the waxes to 90 to 95°C. to melt. Mix the silicone and solvent and heat to the same temperature and add to the melted waxes. Stir until cool.

More specific is the following formula (21) for a liquid car polish of the wax type:

	Per Cent
Silicone oil	1.5
Oxidized microcrystalline wax (C)	2.5
Naphthol mineral spirits	96.0

According to one supplier's literature, (16) the ease of rub-out of paste polishes can also be improved by adding small quantities of silicone fluid to the formulation. Several polish manufacturers, it is said, have found that the addition of silicone resins will improve the gloss and extend the life of their products. A typical formula contains a mixture of three per cent silicone fluid and two per cent of silicone resin.

Spray Type Polish

IT IS ONLY a few years ago that the spray type of auto polish was introduced to the public. (22, 23) Dispensed in handy, low-pressure containers, the wax aerosol consists of the polishing wax, a vehicle for the wax and the propellent. The wax, present as a finely divided solid, consists of carnauba wax, or mixtures of carnauba, synthetic wax and paraffin, dissolved in light, volatile mineral solvents. (3) These ingredients generally comprise between 20 and 30 per cent of the total composition; the rest being the propellent. (24) The vehicle for the wax is soluble in the propellent so that there is only one liquid phase in the container. (25)

Since they offer a number of conveniences, it was expected that these polishes would find a wide market. Despite the success of other products of the aerosol type, however, the spray waxes did not meet with sufficient consumer acceptance to merit their continued promotion. Hence most, if not all, of these wax products were withdrawn from the market.

A number of reasons have been advanced to explain this lack of success. According to one survey, (26) the major consumer objections to automobile spray waxes were based on high cost, mechanical defects, and failure of the products to live up to the claims made for them. Many of the physical and mechanical problems associated with these wax polishes have been studied and solutions to some of them have been suggested. (25) With the elimination of these difficulties and with an improvement in the allocations picture it is possible that wax aerosols may make a comeback.

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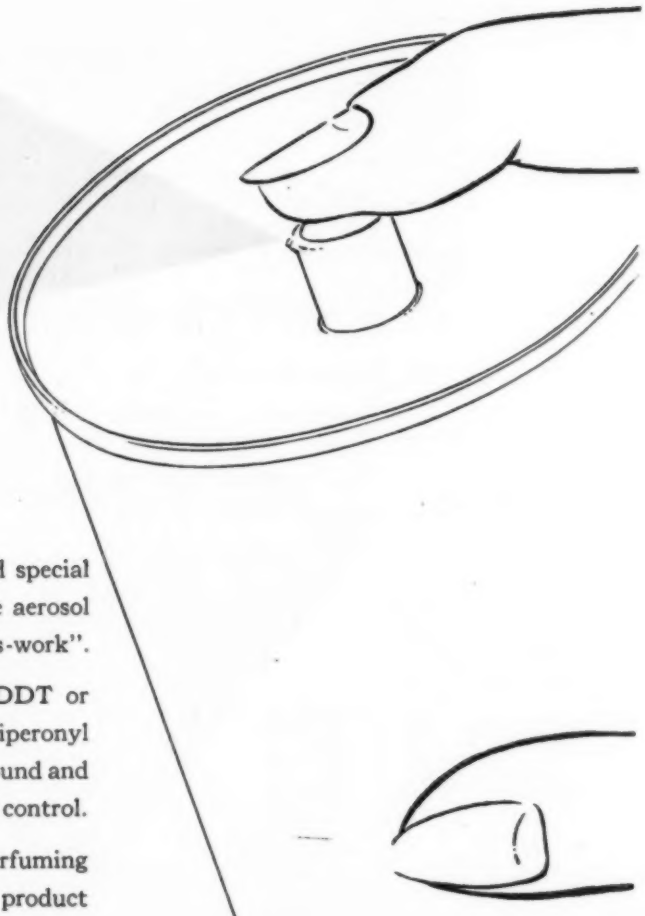


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News

Baird Names Hamilton

Appointment of Ralph Hamilton as chief research engineer of Baird & McGuire Inc., Holbrook, Mass., was announced recently by Gordon M. Baird, president. In past years Mr. Hamilton has been chief chemist of the White Tar Division of Koppers Co., Pittsburgh, superintendent of the precious metals refining department of the American Platinum Works, and has served for three years during World War II in the U. S. Navy. For the past seven years he served as technical director of Trio Chemical Works, Inc., Brooklyn. He is a graduate of Wentworth Institute and of Brooklyn Polytechnic.

Dianol Appoints Bishop

Dianol Inc., St. Petersburg, Fla., recently announced appointment of Crawford M. Bishop, Jr., to the position of sales manager. Mr. Bishop, who is now in charge of Dianol sales, foreign and domestic, was formerly sales manager for Sunbury Wire Rope Manufacturing Co., Sunbury, Pa., and was previously connected with South West Steel Rolling Mills, Inc., Los Angeles.

Palmetto Appoints Officers

Palmetto Chemical & Supply Co., Cheraw, S. C., whose incorporation was announced last month, is headed by B. A. Herman, president. Other officers are: Fred McCallum, vice president; R. R. Sipe, secretary and treasurer, all previously associated with Cecil H. Jarrett Co., Newton. Palmetto is engaged in the manufacture and distribution of sanitary supplies and heavy chemicals, etc.

Lauter with Bostwick Labs

Jack S. Lauter was recently appointed western sales manager of Bostwick Laboratories, Inc., Bridgeport, Conn., producers of packaged power products. He was previously associated with Michigan Chemical Co., St. Louis, Mich., as western sales manager. The position has been created by Bostwick for Mr. Lauter, to handle sales of aerosols in the western area. Mr. Lauter is supervising all Bostwick sales activities west of the Mississippi river, with particular emphasis on the west coast area. His home is in Sherman Oaks, Calif.

J. W. Neiditch Dies

Joseph W. Neiditch of Cornelius Products Co., New York, died recently at his home in New York at the age of 44. Mr. Neiditch was a graduate engineer of Cooper Union Institute. He had been with Cornelius since 1945.

NSSA Regional Meetings

Regional dinner meetings of the National Sanitary Supply Association are scheduled to be held Wednesday, June 11 in Boston, and Thursday, June 12 in New York City. Leo J. Kelly, the association's executive vice-president, will be on hand for both meetings.

Hyman Executives Resign

The resignations of J. Newton Hall, vice-president in charge of sales, and Roy J. Miller, vice-president in charge of manufacturing, were announced recently by Julius Hyman & Co., Denver, Colo. According to company officials both resigned prior to the company's recent purchase by Shell Chemical Corp.

J. NEWTON HALL



It is expected that Lloyd M. Joshel, treasurer, and Robert L. Silber, secretary, will also leave the firm before the end of the year. Both have been directors of the company as well as officers.

Buettner on Vaporizers

William O. Buettner, executive secretary of the National Pest Control Assn., New York, was guest speaker at the meeting of the Professional Exterminators Association, held May 12 at the American Museum of Natural History, New York. He spoke on insecticide vaporizing devices of the electric plug, hand bowl, and aerosol bomb type. The business part of the meeting was devoted to questions and answers.

Germicidal Cloth Offered

Sterwin Chemical Co., New York, recently announced a germicidal cloth, trade-named "Rocloth". Sheets of specially woven thin cotton fabric, twelve inches square, are impregnated with "Roccal", a quaternary ammonium germicide. It is recommended for use in the sanitizing of restaurant equipment, washrooms, for swabbing equipment in food and other industrial plants.

More DDT, BHC for 1952

World supplies of DDT and BHC insecticides in 1952 will increase, according to a report on insecticide supply and demand released recently by the Economic and Social Council of the United Nations. A working party of the U.N. studied reports from 10 nations supplying and/or producing the two insecticides, with a view to determining whether or not there is a critical shortage of DDT and BHC.

Estimated production of DDT in 1952 is 78,000 metric tons, which is 19,000 metric tons over the 1951 figure. Of this amount, 29,000 metric tons are expected to be exported by the producing countries. A similar increase in production and export of BHC is expected.

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Pest Decay Odor Product

Kilgore Chemicals Division of Atlantic Research Corp., Alexandria, Va., recently announced "Metazene", a compound designed to control odors emanating from dead rodents and other pests trapped in inaccessible places after extermination. According to the maker, "Metazene" works by chemical reaction. It does not employ a substitute or masking odor effect, and does not contain substances which function by desensitizing the sense of smell. Since "Metazene" is non-volatile it works best by spraying or atomization. It is also available in aerosol form, and to PCO's in the form of a 40 per cent concentrate in deodorized kerosene, which can be diluted as needed.

Hild Adjustable Handle

Floor scrubbing and polishing machines made by Hild Floor Machine Co., Chicago, are now available with adjustable handles, it was announced recently. By setting a thumbscrew, the handle can be raised or lowered to the operating position that is most comfortable for the operator. The new feature is now standard on all except the two smallest Hild floor machines. Hild floor machines come in six models with brush spreads from 11 to 19 inches. Available with or without solution storage tank mounted on the handle for use with the Hild "Shower-Feed" brush, the machines can shampoo carpeting, as well as scrub, wax, polish, buff, sand grind or steel-wool floors of all kinds.

Dow Advances Dorland

Jack A. Dorland, New York sales representative of Dow Chemical Co., Midland, Mich., has been named manager of the eastern office of Dow Chemical Inter-American, Ltd. and Dow Chemical International, Ltd. The appointment, which became effective June 1, was announced by Clayton S. Shoemaker, president of the two recently organized Dow subsidiaries. Mr. Shoemaker said the Eastern office is located temporarily at 629 Grove St., in Jersey City, N. J.

Except for a three-year period as a captain in the Chemical Warfare Service of the U. S. Army, Mr. Dorland has been with Dow Chemical since his



JACK A. DORLAND

graduation from Cornell University in 1931. He has been attached to Dow's New York office continuously during that period, and has had sales experience in virtually the entire Dow product line including three years in export work. Since 1948 he has been senior salesman in the general chemicals section.

Mr. Dorland is a member of the Army Chemical Corps Assn. and is currently serving as chairman of the auditing committee of the Salesmen's Assn. of the American Chemical Industry. He is a son of the late Ralph E. Dorland, former manager of Dow's New York office.

Bareco Offers New Wax

A new oxidized microcrystalline wax designated "Petronauba C" was announced recently by Bareco Oil Co., Tulsa, Okla. The maker suggests it as a replacement for vegetable waxes in polish formulations and wherever an emulsion containing a hard wax is required. The following specifications for the material are given by Bareco: melting point, 180 minimum; penetration, 7 maximum; color, 3 minimum; acid number, 22/28; saponification number, 50/60; viscosity, 130 maximum. "Petronauba C" comes packed in cartons containing four 20-pound slabs or approximately 80 pounds, and in cartons containing 168 ten-pound slabs or approximately 1,680 pounds each.

Conco Sales Clinic

Conco Chemical Co., Dalals, Tex., recently held a three-day sales clinic at the Lomo Alto Hotel. The conference was attended by seventeen salesmen who represent the firm in eight states.

Buys Chlorophyll Firms

Entrance of Archer-Daniels-Midland Co., Minneapolis, into the chlorophyll and zanthophyll industry with the purchase of Keystone Chemurgic Corp., Bethlehem, Pa. and Chlorophyll, Inc., Neodesha, Kans., was announced recently. ADM takes possession of both properties immediately.

At the same time Daniels announced the formation of a new chlorophyll division headed by Donald G. Carpenter, who was president and general manager of Keystone. The division's headquarters will be in Minneapolis. August J. Buzas, also of Keystone, will be technical director and general superintendent in charge of the firm's chlorophyll plants. R. W. Greeff & Co., New York, will continue as sales agents.

Booklet on Ludox

"Ludox" colloidal silica and its anti-slip action in floor waxes is the subject of a booklet recently published by the Grasselli Chemicals Department of E. I. du Pont de Nemours & Co., Wilmington, Del. The material is an aqueous colloid made by an ion exchange technique. The process for producing the colloidal silica particles involves, in simplified form, the condensation of silicic acid molecules to form highly cross-linked, spherical micelles. Each individual micelle is smooth, extremely minute in size, and harder than wax. It is clear and virtually transparent to the eye. This clarity gives added transparency and luster, often giving the appearance of greater depth of film. The anti-slip action is based on the fact that hard tiny particles of "Ludox" surround softer wax micelles, and press into them when they are stepped on. Energy absorbed at the point of impact keeps the foot from slipping. Diagrams and electron micrographs illustrate booklet, which is available on request.



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Lift Steel Drums Control

Revocation of M-75, the order restricting sale, delivery, use and inventories of steel shipping drums was announced recently by Robert de S. Couch, director, container and packaging division, National Production Authority. According to Mr. Couch ample quantities of sheet steel are now available and apparently will continue to be available. Manufacture of drums is sufficient to take care of all requirements.

USDA Insect Pest Survey

A cooperative insect pest survey and reporting service, in which entomologists associated with State agencies, industry, and the Federal government will participate, was announced recently by the U. S. Department of Agriculture. The purpose of the service is to keep farmers informed of impending insect conditions. The service will attempt to forewarn farmers—no matter what crops or livestock they produce—of current insect pest conditions, according to Avery S. Hoyt, chief of the Bureau of Entomology and Plant Quarantine. New species of insects will be detected before they become economically important, and farmers will have the information needed for prompt control of insect pests that cause serious damage every year.

The survey organization will also serve a defense function by providing the skeleton organization needed for protection against biological warfare if the occasion arises.

Entomologists and other workers engaged in agricultural pursuits will cooperate to make this new service work. It is planned that any insect information within a State, whether detected by Federal, State, local or commercially-engaged entomologists, will be channeled through State offices so that the information can be quickly released to meet local requirements. The report will then be forwarded to Washington, D. C., where a Section of Economic Insect Detection and Reporting in the Bureau of Entomology and Plant Quarantine will combine the information with reports from other States and distribute it nationally.

Kelvin Dorward is heading the Section, which will be a unit of the Division of Insect Detection and Identification, which is headed by Carl F. W. Muesebeck. Louis G. Davis will serve Mr. Dorward as first assistant.

Amer. Home Sales Up

Sales of American Home Products Corp., New York, reached a new high in 1951 of $192,398,340, compared with $164,266,646 in 1950. But net income declined slightly to $11,565,373 or $3.01 a share from $11,844,030 or $3.08 a share in 1950. Total provision for federal and foreign taxes payable on 1951 profits was $14,498,408, equivalent to $3.77 per share as contrasted with $2.98 per share in 1950.

Radioisotopes in Can Study

American Can Co.'s research division, Maywood, Ill., is currently investigating the use of radioisotopes in tracing chemical and biological processes. O. F. Ecklund, Canco technologist, recently attended a four week course conducted by the special training division of the Oak Ridge Institute of Nuclear Studies, designed to teach researchers how to use this new scientific tool.

New Cyanamid Plant

American Cyanamid Co., New York, has received a certificate of necessity from the Government to build a plant near New Orleans, La., for production of chemicals from natural gas, it was announced recently. This will place Cyanamid in the field of basic production from hydrocarbons, and is expected to add a substantial number of new items to the list of the firm's more than 5,000 products. As initially projected the plant will produce ammonia, acetylene, hydrocyanic acid, and derivatives of these compounds, among them acrylonitrile and ammonium sulfate.

The new plant will represent an investment of about $50,000,000 and will be located on a 600 acre site in Jefferson Parish, La., about ten miles above New Orleans on the West bank of the Mississippi River.

Penn Salt Spray Bulletin

"How to Control Cotton Insects with Sprays" is the title of a new service bulletin recently issued by Pennsylvania Salt Manufacturing Co., Philadelphia. The publication lists, in chart form, recommendations per acre for the use of the various insecticide products available to the cotton grower, and guides him in the control of insect pests at any time during the season. Copies are available on request.

Fiero Volume Appears

The seventh edition of *Review of Pharmacy* by Dr. George W. Fiero of Esso Standard Oil Co. was published recently by John Wiley & Sons, Inc., New York. It contains 122 pages, is cloth bound, and measures 9¼ x 9¼ inches. It sells for $3.25. According to the author the book is a complete condensed compend of the drugs, chemicals, and preparations of the United States Pharmacopeia, fourteenth revision, and the National Formulary, ninth edition.

Gair Shifts Sales Managers

Robert Gair Co., New York, recently appointed Hubert A. Downing manager of its Fort Niagara corrugated box division at North Tonawanda, N. Y. Mr. Downing joined the Thames River, Conn., plant in 1923 as a machine helper, later shifting to the planning department. In 1938 he went to the newly opened Cleveland plant, later became sales manager, and division manager in 1943. Mr. Downing replaces as division manager at Fort Niagara the late Edward V. Patrician who died suddenly earlier this year.

Frank E. Newton has been made division manager at Gair's Ohio corrugated box division in Cleveland. He joined the sales department of the Boston corrugated box division in 1930 as an order clerk, later became a salesman. He has been sales manager at Boston since 1943.

John D. Mullins is appointed sales manager at the Boston corrugated box division, Cambridge, Mass. He joined the company in 1929, became a salesman in 1938.



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Saybolt Viscosity at 100°F	30/31 sec.	Unsulfonatable Residue	98%
Flash Point C.O.C.	170/180°F	Color	Water white
Fire Point C.O.C.	180/190°F	Odor	Practically none

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Sanitary Supplies at Restaurant Show

AN EXTENSIVE array of sanitation specialties for the restaurant trade, ranging from dish washing and floor cleaning compounds to insecticides and germicides, was presented by a score of manufacturers at the 33rd annual convention and exposition of the National Restaurant Association in Chicago, May 5 to 9. Floor maintenance machines, automatic dishwashing apparatus, glass washing devices and other mechanical equipment were also shown.

The exhibit was held on Chicago's Navy Pier, where 366 exhibitors occupied over 700 booths, stretching in four lines for a total length of approximately three miles.

New products were noticeably prominent among exhibitors of sanitation chemicals, among them the following:

Calgon, Inc., Pittsburgh, Pa., presented a new mechanical washing compound, "Aura," containing hypochlorite, recommended especially for plastic tableware but which, according to C. A. Pavlik, manager, commercial detergents division, can be used for china, glassware and silverware. Advertising on "Aura" was released just two months earlier, he said.

Economics Laboratory, St. Paul, Minn., introduced "Satinite," a new cleanser for aluminum base dishes and utensils in automatic machines. Another new product was "Dip It," stain remover for plastic dishes. The company, it was announced, is now packaging some of its familiar detergents in three ounce containers, instead of four pound boxes, for better cost control where dishes are washed in sinks. Several new items, it was learned, are under test and will be released shortly. Paul Evans, general sales manager, had charge of the demonstrations.

Diversey Corp., Chicago, presented "Ampolite," a new non-foaming compound, formulated for use in all dishwashing machines and all types of water. With this was also shown a new Diversey "Divomatic" electronic solution control device for mounting on the washing machine, on which patents are pending. S. E. Alvis, sales manager, central div., in charge.

The Du Bois Co., Cincinnati, presented a solution dispenser unit with improved electronic controls for maintenance of the washing solution at the correct concentration in automatic dishwashers. Jack Welch, head of the food division, supervised demonstrations, and T. V. Du Bois, president of the company, was also on hand for the show.

Pex, Inc., sales affiliate of Peck's Products Co., St. Louis, Mo., demonstrated how restaurant dishwashing costs can be controlled through use of the new "Pex" liquid or granulated hand dishwashing detergents and the new Pex Foamadaptor which fits on the kitchen sink faucet. Jack Barry, assistant vice president, in charge.

Hysan Products Co., Chicago, featured "Mark," a new liquid dishwashing detergent for use with a "Proportionaire" device that mixes the compound with proper amounts of water. Also shown was a new liquid floor maintenance compound, "Mayntane," and a dual purpose electrical device "Hy-Tron," which kills flying insects and deodorizes in one operation. Harry Brownstein, vice president, in charge.

Klenzade Products, Inc., Beloit, Wis., presented its full line of cleaning products for restaurant sanitation, with emphasis on a detergent briquet feeder for dishwashing machines. T. D. Laughlin, head of restaurant dept., in charge.

E. F. Drew Co., New York, introduced three new products—"Grin," a high concentrated liquid cleanser for heavy duty washing of pots and pans, floors, walls, etc.; "Trix," a detergent scouring cream with a pH of 7.5, for kitchen dishware, sinks, tile, tubs, etc.; and "Screen," a polishing cream with silicones which J. Vincent, national field director of sales, said is believed to be the first application of silicones in a cream paste base.

Wyandotte Chemicals Corp., Wyandotte, Mich., had its first public showing of "Fame," a detergent for hand washing of dishes, glassware, silver, pots and pans. The product contains a Wyandotte "Pluronic," newest type synthetic detergent, which is said to increase cleansing action, rinsibility and grease dispersion. Also featured was "Salute," for machine dishwashing of china and plasticware.

Insect Killers, Inc., Edgerton, Wis., featured their "I K I" automatic insecticide vaporizer and electronic deodorizer for killing flying insects and banishing unpleasant room odors. The device was designed and developed to comply with the recommendations of the Interdepartmental Committee on Pest Control according to John Hinn, assistant sales manager.

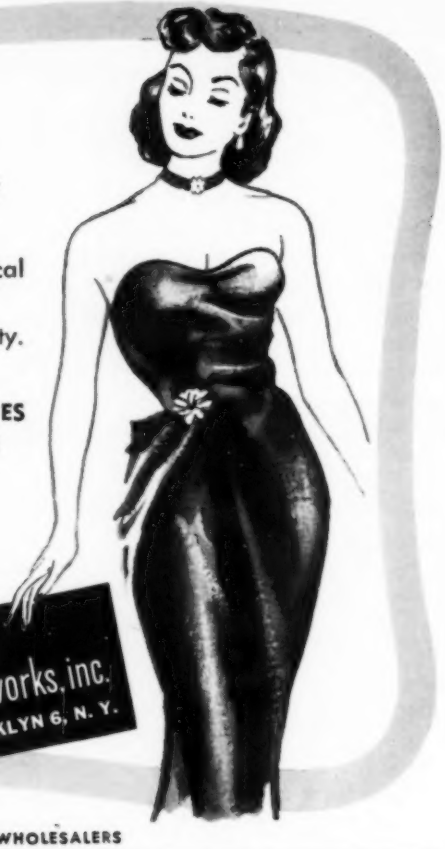
Among exhibitors of floor cleaning and maintenance equipment were Geerpress Wringer, Inc., Benton Harbor, Mich., Hild Floor Machine Co., Chicago, Kent Co., Rome, N. Y.

W. C. Stolk (left), recently reelected president of American Can Co., New York, of which he is the chief executive officer and C. H. Black, retiring chairman, who has been with the firm 44 years.





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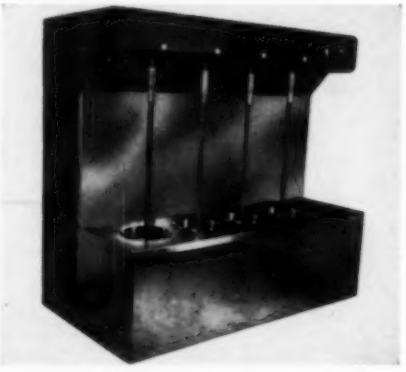
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Pyrethrum

(*From Page 157*)

the intangible yet very definitely felt trend toward the desire for safer insecticides. Should legislation or recommendations from Government agencies firm up this trend, needless to say it favors the safer, less toxic insecticides such as the botanicals.

Another interesting while still not a major factor is the question of resistance evidenced by some insects to the newer chlorinated compounds. This has been noted in a limited way, but in a number of instances, and some experimental tests show resistance possible even with such extremely toxic materials as the phosphates. In all the history of pyrethrum, evidence of insect resistance has not been recorded. It will be interesting to see if such may develop with allethrin.

Does this mean that even with the most exacting chemical synthesis there is a difference from the botanical structure of nature?

From an entomological point of view, of course, the most serious drawback to pyrethrum is its lack of residual insecticidal value. So far nothing significant has been developed as an additive or synergist which will provide pyrethrum with this desired residual action.

Market Outlook

NOW a brief appraisal of the market outlook — the very important sales pulse of those formulations *which might contain pyrethrum*. The insecticide industry has always been historically competitive. There are many reasons for this, particularly in agriculture. Pyrethrum, however, most recently has been used almost exclusively in the household field so let us examine the market for household insecticides.

The greatest single development, in this connection, in recent years has been the aerosol program. Here history is repeating itself. Just as some years ago the household spray manufacturers placed most of their emphasis on competitive prices rather than on quality, merchandising or advertising, so today we find a similar trend in the aerosol field.

In general, the greatest, most important factor in the distribution of aerosol type dispensers is price. Quality is secondary except on the part of a few manufacturers who prefer to stay with quality formulas. The immediate effect of this is that pyrethrum is distinctly too high priced. So long as aerosol emphasis is on price it is going to remain a serious challenge to those who desire pyrethrum in their formulas.

It is because of these many factors that pyrethrum is now truly at the crossroads.

The economics existing abroad, plus the threat of allethrin, are unfavorable limiting factors. From a technical point of view, particularly as far as safety is concerned, it is still one of the best insecticides available. From a household point of view, practically the only one satisfactory without limitation or restriction as a contact roach killer, accordingly, there is still a market right now for quality products containing pyrethrum.

It would seem then appropriate to conclude that there is going to be continuing reasonable demand for pyrethrum, the volume of its use restricted by the combined factors of price and lack of residual effectiveness. The pressure on price will be severe and if the growers and manufacturers together can use their ingenuity to resolve this problem, it would seem unquestioned that pyrethrum, for the longer range, could remain distinctly in favor and demand.

In a sense the future of pyrethrum is in the hands of the growers, which is probably as it should be. The time has come, however, for them to make important and realistic decisions. As time tolls, the trend is the other way.

—— • ——

Discontinues Drum Deposits

Velsicol Corp., Chicago, recently announced discontinuance of deposit charges on 30-gallon and 55-gallon drums. The new policy became effective May 16.

New Hercules Plant

Hercules Powder Co., Wilmington, Del., recently announced that construction of a new hydrocarbon chemicals plant on a 275-tract on the Delaware River near Gibbstown, N. J., will commence late this year or early next year. The plant will represent an investment of close to $8,000,000, will employ 70 to 80 people and cover about 60 acres.

The plant will produce phenol, para-cresol, acetone, and cymene alcohols. The phenols will be made by a new process developed by Hercules. It centers around the production of organic hydroperoxides as the basic intermediate step in converting hydrocarbons into phenols and cresols. The new method does not consume sulfur or chlorine which are in short supply.

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New Systemic Insecticide

Pittsburgh Agricultural Chemical Co., Division of Pittsburgh Coke & Chemical Co., Pittsburgh, Pa., in cooperation with Chemagro Association recently announced "Systox", a systemic insecticide, which has been approved for aphid and spider-mite control. It was originally developed by Dr. Gerhard Schrader of Farbenfabriken Bayer, Germany. Systox is an organic phosphate ester, and acts as a stomach poison as well as contact poison.

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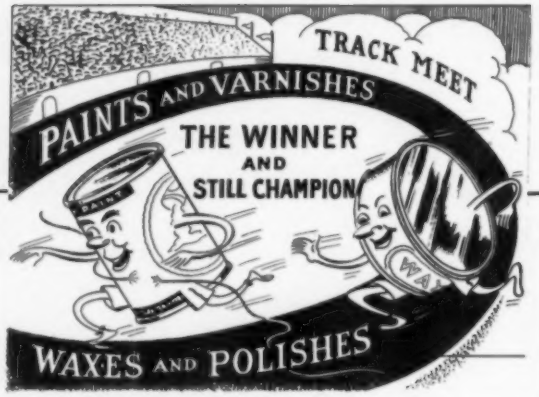
Buys Brooklyn Building

Electron Silicon Sales Corp. recently purchased the two-story garage type building at 790 Union Street, Brooklyn, for the manufacture of metal polish.

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Westvaco Advances Oskin

Westvaco Chemical Division of Food Machinery & Chemical Corp., New York, recently announced the appointment of Donald C. Oskin as assistant manager of sales, replacing John deF. Meyler, who resigned to join Chemical Mfg. Co., New York. Mr. Oskin most recently was director of district sales for Westvaco, and previously he was in charge of Food Machinery & Chemical Corp.'s Washington office.



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"Larvex" Sales Agent

Bernard Kane & Son, Philadelphia, has been appointed sales representative by the Zonite Products Corp., New York, for the sale of "Larvex" mothproofer to the grocery trade in metropolitan Philadelphia and surrounding areas.

Glyco Waxes Catalog

Synthetic waxes made by Glyco Products Co., Brooklyn, N. Y., are described in a new 16-page catalog. The publication carries tables of specifications for Glyco's waxes. These include amide and ester types. They range in melting points from 55°C to 143°C and in hardness from soft plastic to hard and brittle. They are generally light in color, white to tan. Some are insoluble in water and others are dispersible in water. Many are insoluble in solvents except at their melting points. They are compatible with natural and synthetic waxes and resins. Copies of the catalog are available on request.

Dr. Max Hartmann Dead

The death of Dr. Max Hartmann, for many years director of pharmaceutical research for Ciba Ltd., Basle, Switzerland, was reported recently. Apart from his contributions to pharmaceutical research which include "Coramine", he did pioneer work in the field of the synthetic acid soaps ("Sapamines"), the precursors of the quaternary ammonium compounds.

Diversey Advqnces Four

Appointment of C. R. Reid, for the past three years credit manager of Diversey Corp., Chicago, to the position of assistant to W. E. Noyes, vice-president in charge of sales, was announced recently. Mr. Reid joined Diversey in 1946 as credit correspondent. A little more than a year later he became assistant manager of the department and was named its manager in 1949.

R. J. Keller, formerly assistant credit manager, succeeds Mr. Reid as credit manager. After joining the firm five years ago as sales correspondent for the central division, he was moved to the credit department as a correspondent, and was named assistant manager in 1950.

At the same time the advancement of B. B. Button, formerly assistant to W. E. Noyes, to the position of general sales manager was announced.



C. R. REID



R. J. KELLER

When Mr. Noyes was named vice-president in charge of sales a year and a half ago, he retained the title of general sales manager, now held by Mr. Button. In his new position Mr. Button assumes responsibility for sales of Diversey's seven divisions in the U. S. He came to the firm in 1939, working initially on technical development, service, and research for the food industries. In 1942 he became assistant manager of the metal industries department, and in 1945 he was named its manager. Three years ago Mr. Button was appointed assistant to the general sales manager.

Donald V. Hannibal, assistant director of the firm's technical development department for the past year, has been named director. Mr. Hannibal joined Diversey in 1947 as a chemist in the research laboratories. At the time of his transfer to the technical development department a year ago, he headed analytical service and control for the chemical laboratory, a division of the research laboratories.

B. B. BUTTON



D. V. HANNIBAL



Pesticide Poisoning Rare

Dr. William F. Durham, U. S. Public Health Service, addressed a meeting of government industrial hyfienists at the Industrial Health Conference held recently in Cincinnati. His topic was the toxicological evaluation of some of the newer pesticides. He said that human poisoning by modern pesticides, except in rare cases of dermatitis, always involved intensive exposure. He warned, however, that because modern insecticides are responsible for only a small portion of accidental deaths users should not adopt a complacent attitude in their handling. He pointed to the enormous savings effected by the use of insecticides resulting in increased agricultural yields and better public health. He concluded that the best ways of reducing insecticide poisoning were the channels of education, labeling, and establishment of tolerances.

BHC in Wood Preservation

Benzene hexachloride is now being used by Southern lumbermen to control insects attacking green hardwood and pine logs, in line with recent research findings of entomologists of the U. S. Department of Agriculture, it was learned recently. Use of BHC provides a way of protecting felled logs which cannot be immediately processed.

Entomologists recommend use of 1¾ pounds of the gamma isomer of BHC mixed in 50 gallons of No. 2 fuel oil and sprayed on the logs at the rate of one gallon of spray mixture for each 100 square feet of bark surface. It is imperative that all bark be completely wetted with the spray. Single logs can be sprayed effectively with a common knapsack type sprayer, but stacked logs require treatment with equipment capable of delivering spray at pressure of 200 pounds per square inch.

For treating green lumber an emulsion of five ounces of the gamma isomer of BHC in 50 gallons of water is recommended. This can be adedd directly to the vats containing fungicides, which lumber mills normally use for dipping lumber to prevent sap stain.

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Robert R. Kurtz Dies

The sudden death of Robert R. Kurtz, an employee of John Powell & Co., New York, for the past seven years, was announced recently. Mr. Kurtz served in Powell's credit and purchasing departments.

Milk Sanitarians to Meet

The 39th annual convention of International Association of Milk and Food Sanitarians, Inc., is scheduled to be held September 18 to 20 at the Nicolett Hotel, Minneapolis, according to a recent announcement by H. L. Thomasson, president.

DesMarais Joins Pennsalt

Hubert A. DesMarais' appointment as general sales manager of Pennsylvania Salt Manufacturing Co. of Washington was announced recently.

Mr. DesMarais, formerly Pacific Coast sales manager for General Dyestuff Corp., New York, with headquarters in San Francisco, is now at Pennsalt's central office in Tacoma, Washington.

Koppers Advances Byrom

F. W. Byrom, superintendent of the Follansbee, W. Va., plant, Tar Products Division of Koppers Co., Pittsburgh, has been named production manager of the division, it was announced at company headquarters recently.

He succeeds R. C. Stromquist who has been assigned to the division's technical department to devote his full time to development, production and servicing the division's enamel and cold applied coatings. At the same time, it was announced that F. M. Smith, assistant superintendent of the Follansbee plant since 1949, has been promoted to the position of superintendent.

Ellis CSC V.P.

Appointment of Sydney T. Ellis as a vice-president of Commercial Solvents Corp., New York, was announced recently. His principal responsibility is in connection with the firm's expansion and development program. During the past year Mr. Ellis served as assistant to the president, in which capacity he will continue.

He has been associated with the chemical industry since 1934, is a



SYDNEY T. ELLIS

graduate of Virginia Polytechnic Institute, and served during World War II as Lieutenant Colonel with the Army Engineer Corps.

1952 Pesticide Handbook

Pesticide Handbook by D. E. H. Frear. Published by College Science Publishers, State College, Pa. 176 pages, 6 x 9 inches, flexible, glazed cover. Price, $1.25. The 1952 revised edition of *Pesticide Handbook* closely follows its predecessor. A new section on properties, compatibilities and hazards of common pesticides has been added; the list of trade named pesticides has grown by approximately ten percent to over 4,400, and the book carries a new listing for animal repellents.

Crain in AF Men's Defense

Lacy E. Crain, president, Conco Chemical Co., Dallas, Tex., recently made headlines in newspapers because of his part in revealing that reserve officers at Randolph air force base in San Antonio had demanded the Air Force apologize for "illegal charges" that the men had refused to fly. Mr. Crain earlier offered to make the first contribution of $100 to a defense fund for the stay-down fliers. Mr. Crain, a sanitary supply jobber, is active in the affairs of the National Sanitary Supply Association, of which he is a former secretary.

U. S. Sanitary Folder

A two-color brochure showing in drawings and photographs details of the firm's liquid soap making processes and operations was published recently by U. S. Sanitary Specialties Corp., Chicago. Entitled "Inside U.S." the four-page folder shows the step-by-step flow of soap in its fabrication and highlights the equipment devised by the company.

New De-Fogging Liquid

A liquid which cleans and prevents fogging on glass surfaces was introduced recently by R. & L. W. Products, Inc., New York. The company claims that an application of "Antifog" on automobile windshields will clean and keep the surface free of fog for two weeks. A four months supply, packed in a four-ounce squeeze bottle retails for $1. A variation of this product has been packaged in a special plastic vial called "Antifog Applicator", and is designed for use on eyeglasses, and all types of lenses.

New Quick-Kill Pesticide

Universal Chemical Manufacturing Co., Miami, Fla., recently announced a new insecticide marketed under the trade name "Boom." The company claims that its product possesses a high factor of quick-kill for all insects, as well as longer residual effect.

BHC Analysis to be Studied

The Bureau of Entomology and Plant Quarantine of the U. S. Department of Agriculture recently held a meeting of representatives of government and industry to discuss methods of analysis of benzene hexachloride and lindane, and formulations of BHC and lindane, as well as combinations of BHC and lindane with DDT.

N. Y. Office for Shamrock

Shamrock Chemicals Corp., Stamford, Conn., recently announced the opening of a New York office at 420 Lexington Avenue. The company specializes in petroleum waxes and natural gums.

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Materials: Exterior metal parts have baked-enamel finish to harmonize with plastic color.

Specifications: Size—8" high x 4" diameter. Weight—6 oz. Capacity —approximately 1 pint (liquid measure).

Packing: Standard packing—1 unit to individual re-shipper carton (weight—12 oz. per carton).



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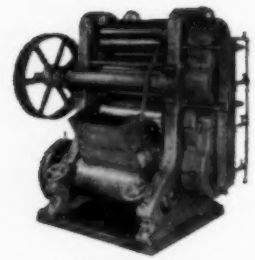
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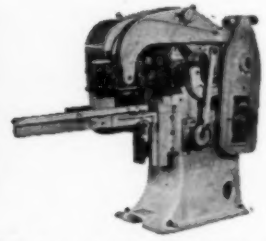
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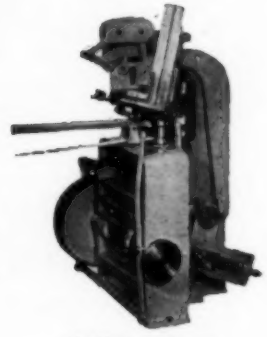
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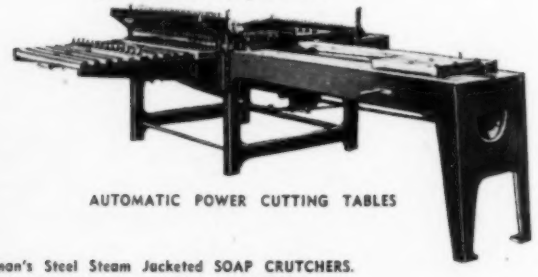
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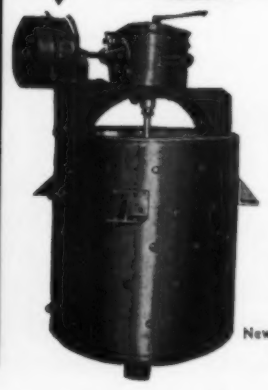
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Production Chemist: Ass't. plant mgr.—cleaning compounds, sanitary chemicals, specialties, foods, vegetable oil products, similar production and personnel supervision; laboratory control; management; safety. Age 37, family, veteran; American Inst. of Chemists; American Oil Chemists Society. $5200. Address Box 559, c/o *Soap*.

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Wanted: Copies of February 1952 issues of SOAP & SANITARY CHEMICALS. Will you help out technical library urgently in need to complete file. Send to Box 543, c/o *Soap*.

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For Sale: Complete soap or sanitary chemical plants. Also individual items such as crutchers, plodders, mills, mixers, presses, dryers, filling equipment, etc. R. Gelb & Sons, Inc., State Highway No. 29, Union, N. J.

For Sale: Viscolizers and homogenizers, completely rebuilt and guaranteed and with late type stainless steel sanitary heads and pressure valves. Also rebuilt machines with standard heads and valves — or good used machines. Send for bulletin and prices. Otto Biefeld Co., Watertown, Wis.

For Sale: New 1500# Soap crutcher; cutting table; Jones press; wrapper type S; 3000# crutcher motorized; 3&5 roll mills; 10" plodder; other soap machy. I. E. Newman, 5602 Blackstone Ave., Chicago, Ill.

For Sale: 20-bbl. soap crutcher; 600# jacketed horizontal ribbon mixer; 50# to 2000# horizontal ribbon powder mixers. Broughton 50 cu. ft. double arm powder mixer. Steam jacketed steel mixing kettles. Stainless steel steam jacketed kettles. Stainless steel tanks up to 16,000 gal. Shriver 30" cast iron filter press, 35 plates, center feed, open delivery. Perry Equipment Corp., 1410 N. 6th St., Phila. 22, Pa.

For Sale

For Sale: Proctor & Schwartz 6-Fan automatic soap chip dryer, 2-roll chilling unit, large roll 48" dia. Empire State foot presses. Soap frames. Allbright-Nell 4'x9' chilling rolls. Lehmann 4-roll W.C. 12"x36" steel mill. Houchin 8-1/2"x16" 3-roll and 18"x30" 4-roll Granite stone mills. Kettles and tanks, iron, copper, aluminum and stainless. Dryers vac. & atmos. Jones automatic soap presses. Slabbers and cutting tables, hand & power. Crutchers. Six-knife chipper. Filter presses 12" to 42". Wrapping & sealing machines. Powder, paste & liquid mixers. Rotex sifters. Filling machines. Grinders. Hammer mills. Colloid mills. Three-roll steel mills 8"x22" to 16"x40". Portable elec. agitators, pumps, etc. Send for bulletin. We buy your surplus equipment. Stein Equipment Co., 90 West Street, New York 6, N. Y. WOrth 2-5745.

For Sale: Day one thousand pound ribbon powder mixer with reduction gear. Address Box 556, c/o *Soap*.

Interested in Chemical Specialties? See page 178 for more complete details.

For Sale: 1—4' x 8' steel flaking or cooling roll; Union Bag sewing machine, 80500 DZ head, M.D.; Sperry 24" Recessed cast iron filter press; Shriver 30" plate & frame C-1 filter press; Sperry 30" aluminum P & F filter press; Munson 2000 lb. rotary batch mixer; 1-Houchin Perfection jacketed crutcher, 3000#; 1—Std. Knapp self-adjusting gluer-sealer and compression unit; 100 lb. jacketed soap

For Sale

crutcher; 1—Day No. 71S/S Roball Sifters; Size 11, 23, 43 and 53 Rotex screens; Dopp 350, 650 gal. jacketed, open kettles; Jones automatic "K" soap press; 1—Houchin #4 para block press; Mikro No. 1 and No. 2 Pulverizer; 1—Wolf 1800 lb. ribbon blender; 18 Aluminum storage tanks, 800, 600 and 250 gals.; Special—27 unused rectangular 200 gal. aluminum storage tanks at only $75 each plus $15 crating. Only a partial list. Send us your inquiries. We buy your idle machines. Consolidated Products Co., Inc., 15-21 Park Row, New York 38, N. Y. Phone BArclay 7-0600.

Reader Sees It

(*From Page* 41)

T. O. Bateman, Sr.,
T. O. Bateman Co.,
San Diego, Calif.

* * *

Here, we rush to our own defense. We do not believe that our satire has been aimed at the "small soap manufacturer and jobber" any more than at his larger competitor. Nor have we carried the torch for the larger companies, as Mr. Bateman infers. Nor has the "giant advertiser" influenced our opinion. We wonder if Mr. Bateman has read our blunt comments about some of their advertising. Furthermore, the "giant advertisers" of the soap industry do not advertise with us; our advertising support over the years has come from the so-called "small manufacturer." If we have "jumped to a conclusion," it follows thirty years of close contact and study of the field.—Ed.

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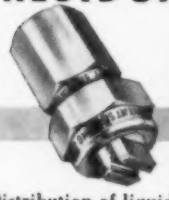
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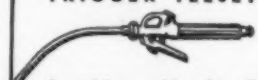
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Tale Ends

IN PUBLICITY-MAD America, the zenith of attainment is to get one's picture in the papers. Usually, the means to attain this desirable end are of minor importance. Shoot your grandmother, cut your throat—anything as long as you make it. Recently, a housewife made the grade by complaining that when she poured washing powder into the dish pan, it made her sneeze. An alert newspaper photog, hot on the trail of important shots, snapped her in the midst of the sneeze. Ah, journalism.

* * *

Does the Fragrance Foundation manufacture "foundations?" This is a question which we heard a salesman ask the elevator operator in the building where the new FF office is located in N. Y. The salesman added that he sold supplies to corset manufacturers and hence his interest in F.F. And this is the gospel truth, gentle reader. For the benefit of those not informed on the ways and means of the Fragrance Foundation, it's a trade group whose job is to get more women to use more perfume more often.

* * *

Warning to non-resident manufacturers and marketers who sell in Mississippi under the new addition (House Bill No. 612) to the Mississippi Economic Poison Law of 1950! You may have received the form to fill out which requires a bond and also giving full power of attorney to the Mississippi Secretary of State for acceptance of service for violations. This is far too broad a liability for any out-of-state seller to assume—dangerous, we are told by attorneys. So, if you fill in the form and return it with your $5 fee, you really are sticking your neck out.

* * *

And what ever became of Fairy Soap? We mean in the U. S. Now, in England, we note that Thos. Hedley, P & G affiliate, is marketing a soap by this name and have recently revamped its package, putting it back in a carton which had been verboten during the wartime paper shortage. But, in America, it seems that fairies no longer retain their popularity of yesteryear. Today it would be a tough brand to sell to the average American male.

* * *

P & G are just about getting their new plant at Caracas, Venezuela, into production. They will make Tide, Camay and other P & G products for the local markets. The superintendent of the new plant is Ed McDougall. Well, Senor McDougall, here's mud in your eye and lots of good luck in the new venture.

* * *

Howard Young, one of Fred Young's five sons who ekes out a living with the Davies-Young Soap Co. out in Dayton, Ohio, is Republican chairman for Miami County and at the moment reported up to his ears in politics and delegates. Late reports have it that Howard right now will swap two delegates for an order for five drums of coconut oil shampoo on firm order and no questions asked.

* * *

Greetings to all their old pals and cronies in the soap racket have just come up from Florida from two former stars of the industry, both retired from Armour—none other than Dashing Dan Flick and Handsome Tom Galvin! Nils Dahl, AASGP treasurer and Stanley g.m. was the bearer of the good tiding to those still slaving away at their daily jobs trying to sell soap in this day and age. Nils, Dan and Tom, and their families, had something of a get-together recently at Miami Shores, Fla., when Senor Galvin now resides.

* * *

Brass, brass by the ton all over the place! Never have we seen so much industry big brass congregated at one place as at the Lever House official opening in N. Y. a month ago. Bernard Baruch, Jim Farley, General Lucius Clay, J. Ochs Adler, and so on, not to mention top Unilever men from abroad. And the soap industry was not without other prominent representation, notably Ed Little, prez of C-P-P. George Wrisley of the Chicago Wrisleys and prez of AASGP, Roy Peet of the K. C. Peets and others of note. Yes, gentle reader, it was quite a show, quite a show!

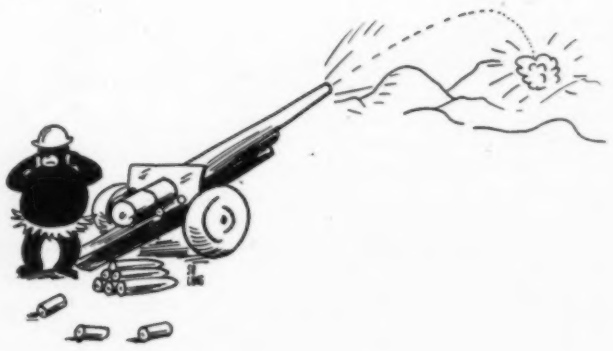
* * *

Insecticide vaporizers are being given a very careful behind-the-scenes look-see under the direction of none other than Doc Lehman of FDA and Justus Ward, top toxicological technician of USDA. The check up, of course, is along the line of protection of the public health in view of the great expansion in the sale and use of these insecticidal devices. As soon as anything specific comes out of this, if it does, we will let you know pronto.

* * *

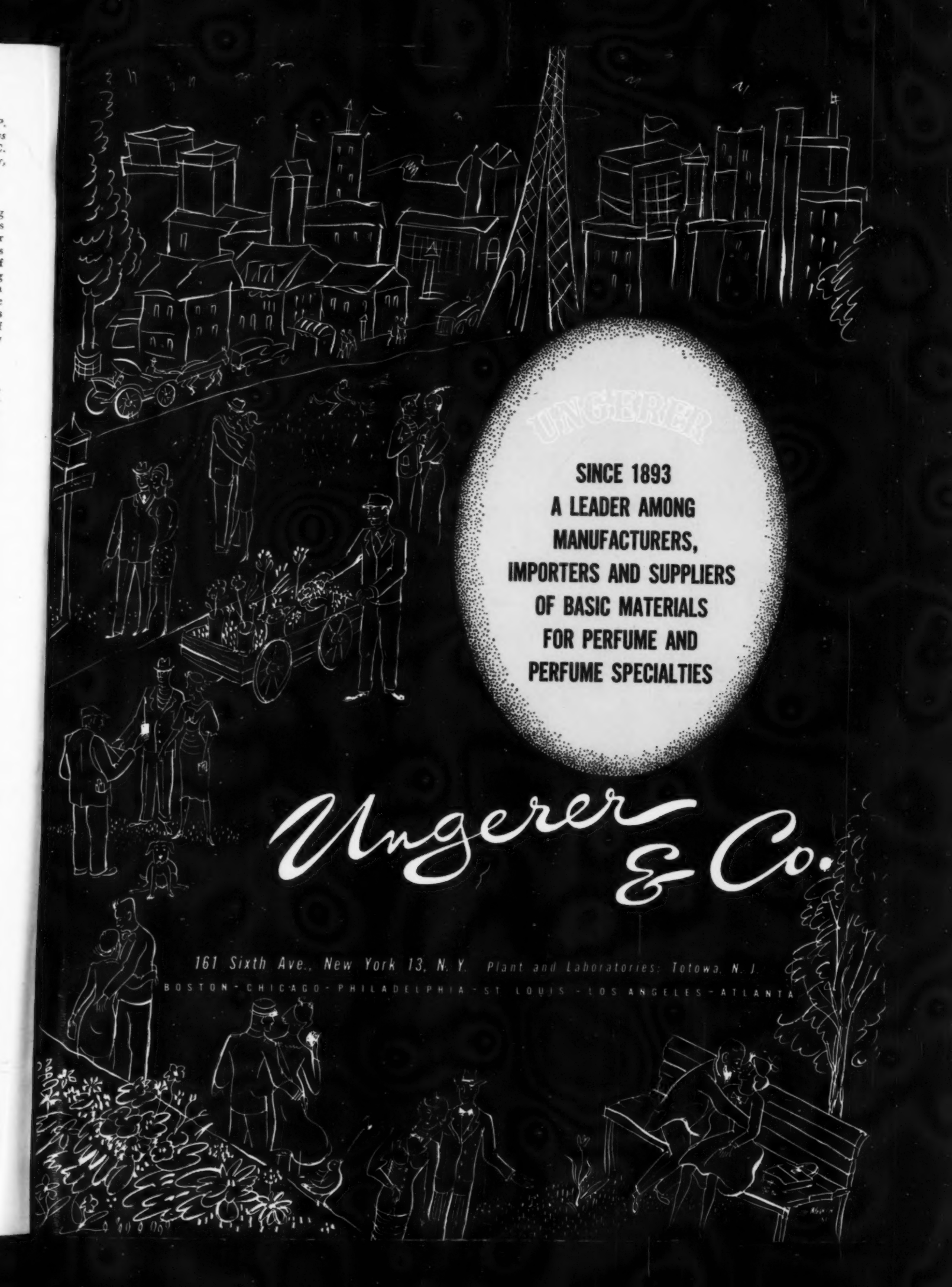
As the Chemical Specialties Mfrs. Assn. gathers in Boston for its 38th annual mid-year meeting which is a record-breaker for attendance, the first gathering of a new section of the association is being held — Automotive Chemical Products Section. The association formerly composed of five sections—insecticide, aerosol, disinfectant, floor wax, soap and detergent specialties—now adds a new member to the family. Welcome!

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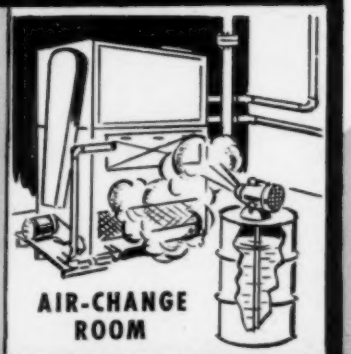


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Please send information on The CHALLENGER Sprayer, Insecticides and Glycol Sprays that you recommend for use in this Jet-Powered Unit.

Name _____

Firm _____

Address _____

City _____ State _____